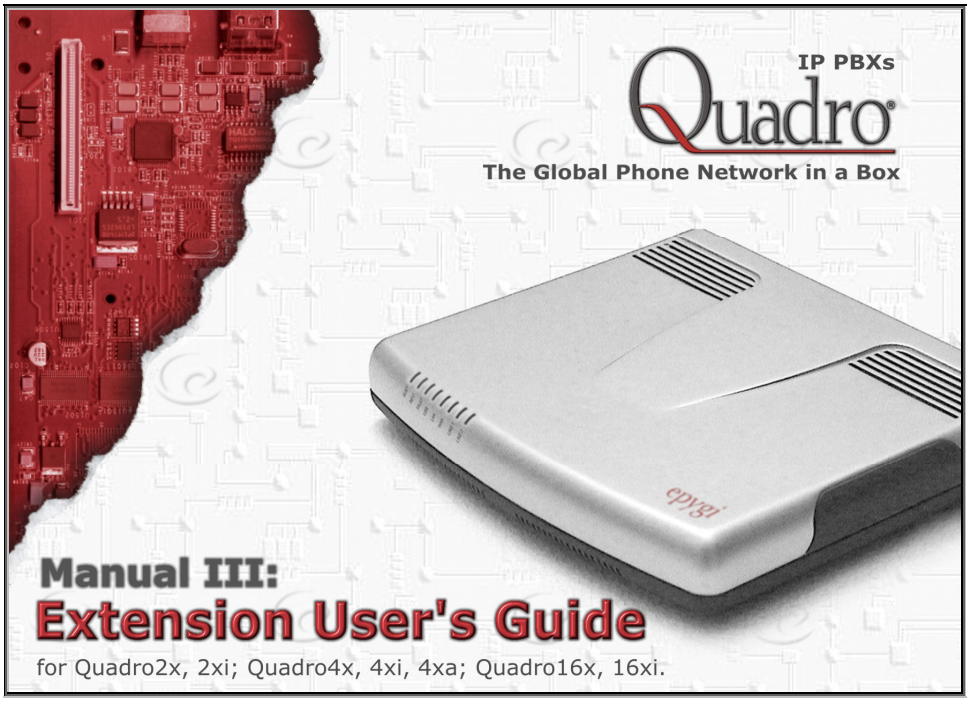

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SW Release 4.1.33 and higher

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This guide describes step-by-step instruction to install and configure Quadro.

Manual II: see Administrator's Guide

This guide describes detailed the menus available for administrators only and includes further all system default values at a glance.

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About this Extension User's Guide

The Quadro Manual is divided into three parts:

- **Manual-I: Installation Guide**
  gives step-by-step instructions to provision the Quadro IP PBX and configure the phone extensions with the Epygi SIP Server. After successfully configuring the Quadro IP PBX, a user will be able to make SIP phone calls to remote Quadro devices, make local calls to the PSTN and access the Internet from devices connected to the LAN.

- **Manual-II: Administrator's Guide** that explains all Quadro IP PBX management menus available for administrators only. It includes a list of all System Default Values.

- **Manual-III: Extension User's Guide** explains all Quadro management menus available for extension users. A list of all call codes can be found here in Extension User's Guide.

This guide contains many example screen illustrations. Since Quadro IP PBXs offer a wide variety of features and functionality, the example screens shown may not appear exactly the same for your particular Quadro IP PBX as they appear in this manual. The example screens are for illustrative and explanatory purposes, and should not be construed to represent your own unique environment.

Quadro's Feature Codes explains all call codes available for extension users.

Quadro's Auto Attendant Services explains the operating mode of Quadro's auto attendant and lists the call codes that may be used to enter the auto attendant.

Quadro's Graphical Interface explains describes the Quadro's graphical user interface and explains all recurrent buttons.

Extension User's Main Page explains the input options available for extension users and administrators. The input options may be selected from the extension user's main page Extension Settings.

Appendix: Glossary explains various technical terms.

Extension Users Welcome Page

Your System Administrator may have sent you such a welcome page where you can find all needed individual information to use with Quadro as an extension user. If not, we suggest that you print this page and enter the needed information manually to use it as a memory aid.

Welcome

You are using a **Quadro Voice Router** made by Epygi Technologies, Ltd. This product incorporates SIPVoice™ Digital Signal Processing technology to send crystal clear voice around the globe without associated fees for long distance. But, you will soon learn, it does much more. Your **Quadro Voice Router, The Global Phone Network in a Box**, operates in much the same way as systems with which you are already familiar: a telephone, a PBX, voice mail, a phone book, etc. Beyond that, the **Quadro Voice Router** provides capabilities you never believed were accessible in a customer premise telephony product. Soon you will experience the freedom and power of the **Quadro Voice Router, The Global Phone Network in a Box.**

To get started the following information is helpful.

PHONES

Your extension number is _____ and your password is _____ (optional).

Remember to type the **Auto Attendant number** when you pick up your phone receiver to find THE WELCOME SPOT. ***0** will take you directly to voice mail for your extension. ***4** will confirm your extension number.

LOCAL PHONE LINES

The Quadro2x offers 1 external phone line, Quadro4x offers 2 external phone lines, Quadro16x offers 4 external phone lines. They are:

1.: _____ **2.:** _____ **3.:** _____ **4.:** _____

IP

To reach your Quadro Voice Router from a network connection inside your office, home or place of utilization, connect a Web browser to **IP address:**<IP address> (172.30.0.1 is the default IP address).

The email address of your Quadro Voice Router System Administrator is <email address>

The phone number of your Quadro Voice Router System Administrator is <phone numbers>

SIP

Your SIP number (an Internet phone number) is <SIP number>@sip.epygi.com.

This is a number you can give others in order for them to reach you.

The SIP number to reach the Auto Attendant of your local Quadro is <SIP number>@sip.epygi.com.

Your SIP group link which provides you a phone directory of numbers to call is:

http://www.epygi.com/sip/grp_view.php?viewgrp=<groupname> **<groupname>**

The email address of your SIP System Administrator is <email address>

The phone number of your SIP System Administrator is <phone numbers>

Quadro's Feature Codes

This chapter describes how Quadro's feature codes allow the user to navigate through Quadro's services with the help of a phone handset. These services are **Establishing a Call**, **PBX Services** and **Voice Mail Services**.

Establishing a call

To make a call, dial the **Routing Number**.

Routing Numbers and available routes to, from and through Quadro are listed in the **Call Routing Table**. The **Call Routing Table** is configured and managed by Quadro's Administrator. To receive information about dialing rules, please contact the administrator.

Please Note: You may accelerate establishing a connection by entering a pound (#) sign dialed at the end of the routing number.

Using Quadro's PBX Services

PBX Services accessible at the dial tone, characterized by beginning with the key *:

Entering the Voice Mail Services (see further key codes below)	*0
Redialing automatically If you hang up afterwards, your phone will start ringing as soon as the last called destination is reached. If you keep the handset lifted, the connection will be established as soon as the called party answers. A specific beep sound will be heard during the entire auto-redialing period (specified on the Basic Services page). Another beep sound will be heard if no auto redialing is possible. To stop the auto redialing process, simply lift the handset and hung up again (if you were keep waiting with the handset lifted, you will need to push the hook button twice on your phone to stop the redialing). **Please Note:** This service is functional for SIP and PBX calls only. For PSTN calls, this feature works as a single redial (with no multiple attempts to reach the called destination).	*1
Calling back the last caller If calling back is not possible, you will hear the message "The dialed number doesn't exist".	*2
Enabling/disabling the Do Not Disturb service turns off/on your phone bell for the time period indicated on the Quadro management page Do Not Disturb Settings. Incoming calls will be routed to voice mail.	*72
Blocking the last caller The last caller party will be blocked and added to the table on the management page Incoming Call Blocking, where you may unblock it later. This service is available for 10 seconds after the call has been terminated. **Attention:** Blocking the caller with anonymous caller ID (for example, anonymous@anonymous or similar) will lead to blocking all callers with an unknown caller address.	*73
Getting the line information You will hear your line, extension and SIP number.	*74
Forwarding Management is configured according to the Unconditional Call Forwarding settings for **All Callers** entered into the page Unconditional Call Forwarding Settings. If no unconditional forwarding is configured for **All Callers**, the system will not activate the forwarding service and a voice message will ask to configure the forwarding settings first. (See further key codes below.)	*4
Alternative Call Park The service acts as an alternative **Call Park** dedicated mainly to IP line users, but can also be used by local FXS users. To park the call using the Alternative Call Park feature, the call should be held first using the appropriate **Hold** button on the IP Phones (for IP line users) or by dialing the Flash 0 key combination (for FXS users). When the call is held, *5 should be dialed to park the call. Further actions are the same as for the Call Park service shown below.	*5

PBX services accessible during the call (for phones connected to the FXS lines), characterized by starting with the key Flash.

Keeping a call on hold Flash 0 is used to hold the active connection, in order to place or receive a second call. When holding the first call, the user is able to place a call to a third party, in particular cases for conferencing (3 way calling) or call transferring purposes. To be able to receive a second call while currently being on a call, the call waiting service should be enabled on the management page Basic Services. When a second call comes in, the beep sound indication is heard in the active call.	Flash 0
Transferring a call without consultation Press Flash to hold a call partner and to get a dial tone (within approximately 1 second). Enter the **phone number of the destination phone** where the call should be transferred to. Hang up on the ring tones. The call on hold will be transferred to the specified destination. **Transferring a call with consultation** Press Flash to hold a call and to get the dial tone (within approximately 1 second). Enter the **phone number of the destination phone** where the call should be transferred to. Talk to the called party and then hang up. The call partner on hold will be connected to the called party.	Flash
Joining active lines to start a conference call Hold the first call (Flash 0), make the second call (or receive a new one) and press Flash 3 to join both active lines together for the conference call. To terminate the conference call with the first or second party, use correspondingly Flash 1 or Flash 2 key combinations. **Attention:** Pressing Flash and waiting for 5 seconds will initiate a call switch and will connect you back to the held party instead of initiating the a conference call.	Flash 3
To terminate the call	Flash 4
Call Park Dial Flash 5 to park a call (system will play the SIP username of the first available extension configured for the call parking). Go to the other location and call the extension that initiated the call park to pick up the parked call. Both PBX and IP calls are allowed to use this service. For PBX calls, that extension number should be dialed. For IP calls, the Quadro when activating the **Call Park** service, plays the SIP address. The system will ask for authentication and, if successfully entered, it will resume the parked call. To use the **Call Park** feature, the call parking service should be enabled for one or more extensions on the Quadro. **Attention:** The Call Parking is valid within the timeout defined by Quadro's administrator, during which hold music (if configured) will be played to the parked destination party. Contact your system administrator if you need the call parking timeout to be modified. When the **Call Park** timeout expires, a short ring notification will be sent to the phone initiating the call parking, and if no one picks up the parked call, or if the phone is off the hook, the parked destination party will be automatically disconnected.	Flash 5

Forwarding Management

* 4 **Forwarding Management** (when this menu is accessed, the Unconditional Call Forwarding service is already getting toggled)	
1 Toggle (enable or disable) the Unconditional Forwarding service again	2 Change the Forwarding Number
	Dial a new **Forwarding Number** and press #
	Confirm the new Forwarding Number with # or press * to dial a new Forwarding Number.

Please Note: Using the **Change the Forwarding Number** option will change the first entry in the **Unconditional Call Forwarding** table with **Auto** call type to the inserted **Forwarding Number**. Any other entries with **Auto** call type, as well as with other call types will not be modified.

Voice Mail Services

*0 Enter Voice Mail Services *		
1 Voice Mailbox	3 Personal Settings	4 Change Password

* After the first boot-up of the Quadro or if the Voice Mail Configuration Wizard is manually enabled by Quadro's administrator, entering the Voice Mail Services for the first time will activate the Voice Mail Configuration Wizard which will prompt the essential user's personal settings. Below are instructions on how to proceed with the Voice Mail Configuration Wizard from the handset.

*0 Enter Voice Mail Services for the first time after Quadro's first boot-up, reset factory default or Voice Mail Configuration Wizard activation	
Dial the extension user's new **Password** and press #	
Confirm the extension user's new **Password** and press #	
Record a **Voice Mail Greeting** and press #	
* Apply recorded Voice Mail Greeting and move forward to the next step	# Record Voice Mail Greeting again
Record a **User's name** and press #	
* Apply recorded User's name and exit	# Record User's name again

The **Voice Mail Services** are divided into three parts: **Voice Mailbox**, **Personal Settings** and **Password Change**. Each of these parts has a hierarchy that is described below.

*0 Enter Voice Mail Services		
*0 Exit Voice Mail Services	*1 Go to the top of the Voice Mail Services Tree	*2 Go one level up in the Voice Mail Services Tree

The following key combinations are available to navigate through **Voice Mail Services** menus.

Voice Mailbox

*0 Enter Voice Mail Services		
1 Voice Mailbox Menu		
1 Send a Message or Leave a Reminder	2 Play First Message	3 Get Date/Time Info
4 Play Previous Message	5 Play Current Message	6 Play Next Message
7 Print the attached FAX (and press START button on the FAX machine)	8 Play Last Message	9 Delete Current Message
*	0 Reply or Forward a Message	#

After entering the voice mail services (using the keys *0) press the key 1 to enter the Voice Mailbox menu. The following key combinations are available to navigate within the new messages:

The **Voice Mailbox** menu has the following sub-hierarchy in the **Reply or Forward a Message** and the **Send a Message or Leave a Reminder** menus:

<table>
<tr><td colspan="4">0
Reply or Forward a Message</td></tr>
<tr><td>0
Call Back immediately</td><td>1
Reply by Voice Mail</td><td colspan="2">2
Forward a Message
(any FAX attached to the message will be also forwarded)</td></tr>
<tr><td rowspan="4"></td><td>Dial 1 to mark the message as Urgent, or press pound to assign the Normal priority.</td><td colspan="2">Dial
Destination Number</td></tr>
<tr><td>#
Record a Message</td><td rowspan="2">#
Record a Message</td><td>Dial additional
Destination Number</td></tr>
<tr><td rowspan="2"></td><td>#
Record a Message</td></tr>
<tr><td colspan="2">Dial 1 to mark the message as Urgent, or press pound to assign the Normal priority.</td></tr>
</table>

<table>
<tr><td colspan="4">1
Send a Message or Leave a Reminder</td></tr>
<tr><td colspan="3">Dial
Destination Number</td><td>#
Leave a reminder</td></tr>
<tr><td rowspan="2">#
Record a Message</td><td colspan="2">Dial additional Destination Number</td><td>Dial 1 to mark the message as Urgent, or press pound to assign the Normal priority.</td></tr>
<tr><td colspan="2">#
Record a Message</td><td rowspan="2"></td></tr>
<tr><td colspan="3">Dial 1 to mark the message as Urgent, or press pound to assign the Normal priority.</td></tr>
</table>

Please Note: This service is restricted regarding sending a message to PSTN destinations. A message will be successfully received by the destination if all of the following criteria are met:

- The connection to the destination is successful;
- The voice mail service is enabled on the destination;
- There is enough space in the voice mailbox of the destination;
- The duration of the forwarded/replied message is less than the maximum voice mail duration set up at the destination.

Personal Settings

Use the digit 3 to enter the area where the personal system messages can be modified. A voice notification will play the list of available system messages that may be modified so the user can select the desired system message by the corresponding buttons:

*0 Enter Voice Mail Services				
3 Review System Messages				
1 Greeting Message	3 Incoming Blocking Message	4 Outgoing Blocking Message	5 Your Name	6 Out of Office Message
1 Listen to Current Greeting Message	1 Listen to Current Incoming Blocking Message	1 Listen to Current Outgoing Blocking Message	1 Listen to Current Name recorded	1 Listen to Current Out of Office Message
2 Record a New Greeting Message	2 Record a New Incoming Blocking Message	2 Record a New Outgoing Blocking Message	2 Record a New Name	2 Record a New Out of Office Message
3 Restore Default Greeting Message	3 Restore Default Incoming Blocking Message	3 Restore Default Outgoing Blocking Message	3 Restore Default Name	3 Restore Default Out of Office Message
# Stop Recording or Playback Greeting Message	# Stop Recording or Playback Incoming Blocking Message	# Stop Recording or Playback Outgoing Blocking Message	# Stop Recording or Playback Name Message	# Stop Recording or Playback Out of Office Message

Change Password

Use the digit 4 to enter the area where the extension's user may change its password. This password is used to access personal configuration settings (also voice mailbox) through the Quadro Web Management and the voice mailbox through the handset.

4 Change Password
Dial **Old Password** and press pound
Dial **New Password** and press pound
Confirm **New Password** and press pound

Services for Incoming Calls

Calling to the extension	Calling to the extension's Voice Mailbox		In call queue
1 Skip the greeting message and enter the called extension's Voice Mailbox (authentication required)	0 (during the greeting message) Calling to the Zero Out destination	# Skip the greeting message and record a Voice Mail	0 Leave the call queue and record a Voice Mail

Quadro's Auto Attendant Services

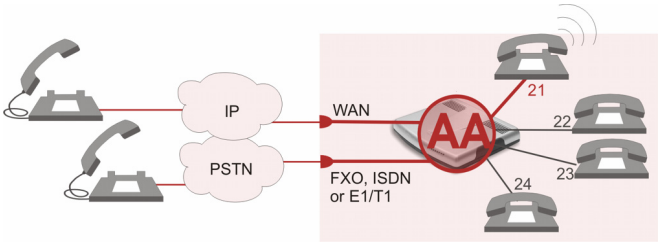
Quadro's Auto Attendant provides remote access to the Quadro voice connectivity services. Specifically, it supports remote connection to Quadro extensions along with their mailboxes and making pass-through calls to other destinations. Remote access to the Quadro auto attendant is possible through IP and PSTN calls.

Quadro's Auto Attendant can be accessed locally, remotely from the IP network (by dialing Auto Attendant's SIP address) and from the PSTN network (by dialing Quadro's PSTN number) if the calls addressed to the Quadro's PSTN number are routed to the Auto Attendant.

Attention: If the Auto Attendant authentication attempts fail consecutively five times, Quadro's Auto Attendant will become unavailable for the next 5 minutes.

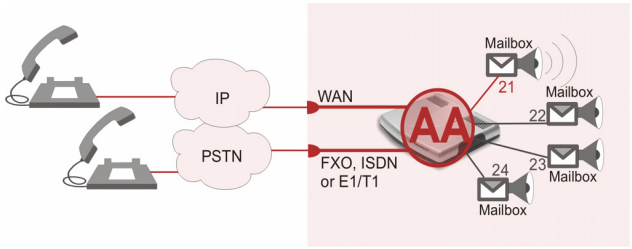
The Auto Attendant services are divided several feature groups, but only **Connection Service** and **Extensions Directory** are supported by the voice messages which helps the caller to navigate within the area using the telephone handset buttons. Other services are available using the appropriate call code, but are not supported by voice messages. Thus, they are hidden for external callers.

Connection Service provides access to all extensions of the Quadro device without restrictions. All Quadro extensions may call each other dialing the extension number. All external callers (using PSTN or IP calling) can reach each Quadro extension dialing Quadro's phone number and using the Auto Attendant's voice menu to be connected to the desired extension by entering the extension number.



Remote Enquiry allows access to the mailboxes of Quadro's extensions (both, active or inactive) in order for example to check the voice messages left for an absent user. The mailbox may be protected by a user password (optional, set by the system administrator or user).

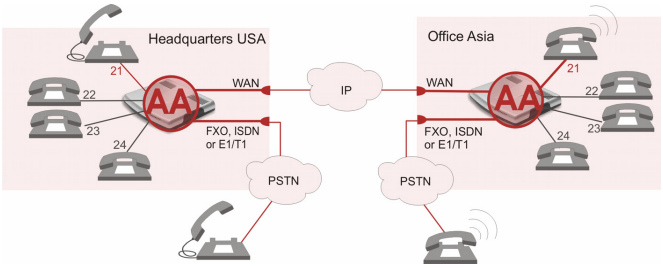
You may remotely access your mailbox dialing Quadro's phone number and using the Auto Attendant's voice menu (key * 0 for Voice Mail) and entering your password (if any). To navigate within your voice mails use the Voice Mailbox service call codes (for example dial 8 to hear the last message in your mailbox).



Call Relay

The Quadro Auto Attendant is registered at Epygi's SIP server by default. It may be used similar to a private switching center if the Auto Attendant is routed to a particular telephone line (FXO, ISDN or E1/T1) as a "default user". It then allows, for example, establishing cost-saving long-distance calls via PSTN to the Quadro Auto Attendant at the United States headquarters, via IP to the remote Quadro Auto Attendant in the Office Asia or via PSTN to the other desired destinations (see Quadro's Feature Codes).

Access to **Call Relay** needs authorization.

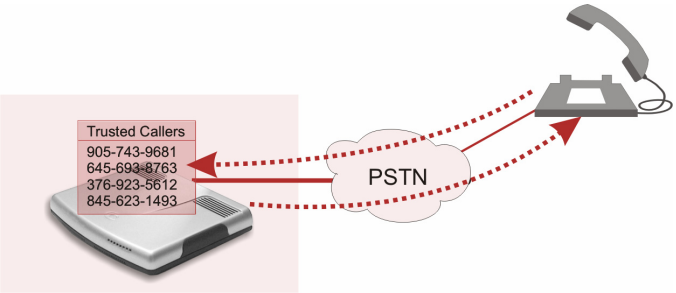


Remote Configuration Menu

This menu allows extension owners to remotely enable/disable the **Unconditional Call Forwarding** service for all callers on the corresponding extension, as well as to change the certain forwarding number in the Unconditional Call Forwarding table. This menu requires extension authorization. For more details about the access key combinations, see Forwarding Management.

Call Back

With the Quadro's Call Back service the PSTN callers can save the call charge when calling to/through the Quadro to the third party IP or PSTN destinations. The Quadro allows you to configure a list of those trusted PSTN callers that are allowed to make free of charge calls. Two types of Call Back configurations are available on the Quadro: **Pre-configured Call Back** and **Remote Call Back Configuration**.



Pre-configured Call Back

For **Pre-configured Call Back** service, a list of trusted PSTN callers must be configured into the Quadro's Authorized Phones Database using Web Management. The Call Back service should be enabled and a valid callback PSTN destination should be specified for each PSTN caller.

To use Pre-configured Call Back, the PSTN caller registered in the Authorized Phones Database simply calls to the PSTN number attached to the Quadro FXO line (the FXO line should be previously routed to the Auto Attendant) from the global PSTN network. Allow the call to ring twice and then hang up. Call Back will be instantly activated and Quadro will call back to the defined Call Back destination. By answering the incoming call, the PSTN party will be connected to the Auto Attendant menu.

Remote Call Back Configuration

Call Back settings may be configured or reconfigured by an authorized PSTN caller using a phone and calling to the Quadro's Auto Attendant. There are two options for configuring Call Back remotely:

- Permanent Call Back
- Non-Permanent (Instant) Call Back

Please Note: Remote Call Back Configuration services are only available when the **Automatically Enter Call Relay Menu** checkbox is disabled in the Call Back settings for the trusted user.

Permanent Call Back

This service allows the callers registered in the Authorized Phones Database to create a new trusted PSTN Caller with Call Back enabled. They can also modify the Call Back destination of an existing PSTN Caller in the Authorized Phones Database. By calling Quadro's PSTN number (that is previously routed to the Auto Attendant) and entering the Auto Attendant menu, the caller is able to use the *6 code to create a new trusted PSTN Caller as well as to modify the Call Back destination for the already registered Caller in the Authorized Phones Database.

Entering the Permanent Call Back reconfiguration menu, the system will ask the caller to login by dialing the number and an appropriate password for the Quadro's extension that is used as a login extension in Call Back settings.

After entering the login successfully the PSTN callers should follow the voice instructions for configuring a new entry or reconfiguring the existing entry in Authorized Phone database.

When the system accepts the settings, the corresponding entry will be logged to the Authorized Phones Database. The detected PSTN caller address must correspond to the one applied by the caller, the FXO line must be available on the Quadro, there must be network connectivity and the destination must be reachable. The PSTN caller will then be disconnected from the Quadro's Auto Attendant and the defined Call Back destination will receive a call from the Quadro within the next 45 seconds. Answering the incoming call, the PSTN caller will be reconnected to the Quadro's Auto Attendant.

Non-Permanent Call Back

Non-Permanent Call Back configuration service allows the trusted caller to organize one-time Call Back to the defined PSTN destination. In this situation, no entry will be logged to the Authorized Phones Database.

By calling Quadro's PSTN number (that is previously routed to the Auto Attendant) and entering the Auto Attendant menu, the caller is able to use the *5 menu to modify the Call Back destination for the already registered Caller in the Authorized Phones Database.

The system will ask the caller to login by dialing the number and an appropriate password for the Quadro's extension that is used as login extension in the Call Back settings.

After successful login, the PSTN callers should follow the voice instructions for reconfiguring the existing entry in Authorized Phone database.

The detected PSTN caller address must correspond to the one applied by the caller, the FXO line must be available on the Quadro, there must be network connectivity and the destination must be reachable. The PSTN caller will then be disconnected from the Quadro's Auto Attendant and the defined Call Back destination will receive a call from the Quadro within the next 45 seconds. Answering the incoming call, the PSTN caller will be reconnected to the Quadro's Auto Attendant.

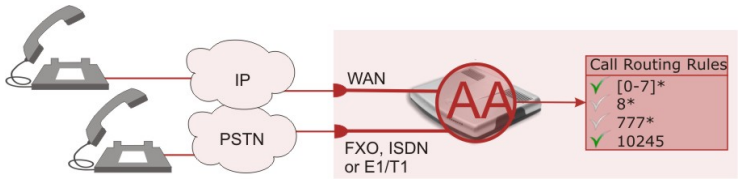
Call Routing Management Menu

This menu is used to manage the routing entries in the Call Routing table, i.e. to enable/disable certain dialing rules by dialing key combinations pre-configured on each routing entry.

Dialing * 7 at the Auto Attendant welcome message, will ask for an enabler/disabler key used to enable or disable the routing rule(s) correspondingly. Since multiple routing rules may have the same enabler/disabler key combinations (the same key may be used as enabler for one routing rule, and as disabler for another one), dialing the certain key will affect all pre-configured routing rules.

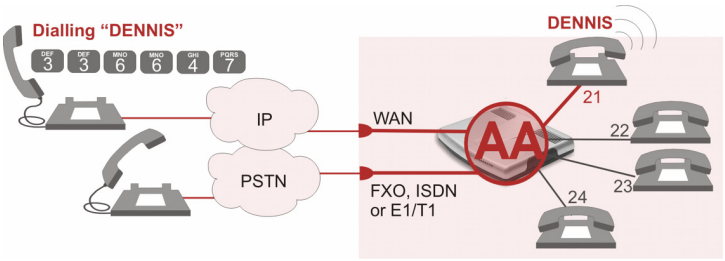
If the routing record has an authorization enabled on the enabler/disabler key, administrator's password will be required to be inserted after the key. Once the administrator's password is dialed, system plays a confirmation about the accepted configuration and the state of the certain routing rule(s) is getting modified.

If administrator's password has been inserted incorrectly for 3 times, no status changes will be applied to any of the routing record(s), even to those which have no authorization enabled.



Mainly targeting external users, Quadro AA also provides voice services for local users. It will be helpful if the desired extension number is unknown.

The **Extensions Directory** is used to access Quadro's extensions by spelling names (assigned to the extensions and configured by administrator) using the keypad of the phone. More than one name may be assigned to an extension, reaching the extension by spelling one of the names attached to it. If the spelled name matches to some record in the extensions directory table, a wave file with the extension user name (or any other information characterizing the extension's user) will be played to the caller. Every extension's user may configure these wave files individually.



Call Codes Available in Auto Attendant

The following key combinations are available to access and manipulate within Auto Attendant services for external calls addressed to the Auto Attendant, incoming calls from the mainline routed to the Auto Attendant or local calls made by dialing the 2-digit attendant extension:

Incoming call to Auto Attendant Services or dial locally	**Keys**
Extensions Menu - establishing a connection to an extension on the called Quadro	- (already in)
Remote Enquiry - establishing a connection to the mailbox of an extension on the called Quadro	* 0
Call Relay Menu - mainly for external calls (IP/FXO or IP/ISDN) but local calls are also allowed. This service avoids having to hang up and redo the entire dialing process if Quadro detects an error in the dialed number or the user decides to cancel the call and dial a new number. By entering the combination * * the call will be interrupted and the user will get an invitation to dial a new one. This is applicable during dialing, after the ring tone has started, and after the call has been established.	* 2
"* *" digit combination is applicable: • During the dialing, • After ring tones start, • After call establishment. **Under the following restrictions:** • This feature can only be used when accessing from PSTN to the external SIP destination through Quadro's AA or vice versa. • This feature is not available on the second Quadro Auto Attendant (calling from one Auto Attendant to another).	
Remote Configuration Menu – allows remote enabling/disabling of the Unconditional Call Forwarding service for All Callers on the extension and to modify the certain forwarding destination.	* 4
Non-Permanent Call Back – allows PSTN callers registered in the Authorized Phones Database to change the callback destination for a one-time callback. After the caller hangs up, Quadro will call back to the newly specified number. This change will not be logged into Authorized Phones Database.	* 5
Permanent Call Back – allows PSTN callers registered in the Authorized Phones Database to reconfigure Authorized Phones Database entries by modifying the caller's and/or callback numbers. The caller will then be able to initiate a callback only by calling from the newly specified caller number.	* 6
Call Routing Management Menu – allows managing the routing entries in the Call Routing table, i.e. to enable/disable certain routing rules by dialing key combinations pre-configured on each routing entry.	* 7
Extensions Directory - accesses Quadro extensions by spelling the extension's user name using the keypad on the phone.	#
Quits the Auto Attendant and starts a dial tone.	Flash 4

Quadro's Graphical Interface

Quadro configuration management may be accessed on two different levels: for users (extensions) and administrators. If you are an extension user, log in with the extension number and the password (if any) you received from your system administrator.

Fig. III-1: Quadro Extension User's page

The Quadro management offers two themes changing the pages' look-and-feel that may be selected on this login page: **Plain** or **Dynamo**. Plain is a very simple theme that shows the menus in a hierarchic structure. Dynamo is the default theme and was created for a fast and easy user interface.

Extension User's Main Page

As a result of logging in as an extension user the page **Extension Settings** page is displayed with the **Main Page** table as a startup. Here you may access the following settings being able to operate and perform actions that are private for each user:

- **Voice Mail**
  - Voice Mailbox
  - Voice Mail Settings
  - Group List

Your Extension

- Call Statistics
- Speed Calling
- Account Settings

- **Supplementary Services**
- **Caller ID Based Services**
  - Hiding Caller Information
  - Incoming Call Blocking
  - Outgoing Call Blocking
  - Distinctive Ringing
  - Call Hunting
  - Many Extensions Ringing
  - Unconditional Call Forwarding
  - Busy Call Forwarding
  - No Answer Call Forwarding
  - Intercom
- **Basic Services**
  - General Settings
  - Hold Music
  - Do Not Disturb
  - Hot Line Settings

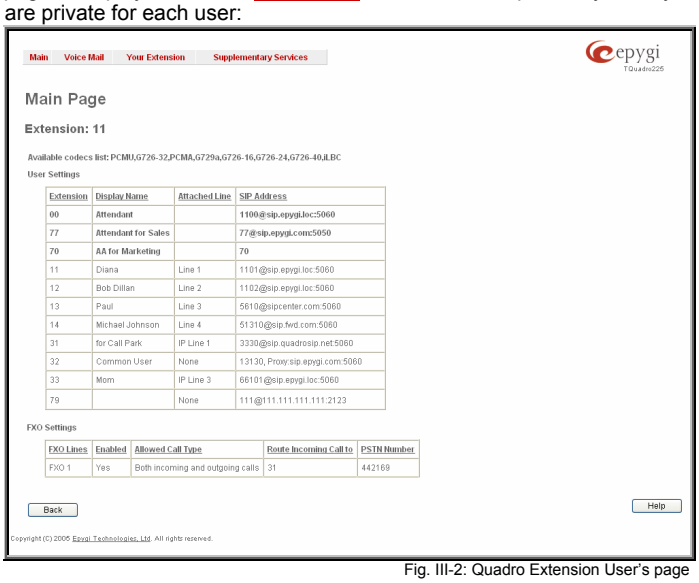

Main
Voice Mail
Your Extension
Supplementary Services
epygi
Main Page
Extension: 11
Available codecs list: PCMU,G726-32,PCMA,G729a,G726-16,G726-24,G726-40,iLBC
User Settings
Extension | Display Name | Attached Line | SIP Address
00 | Attendant | | 1100@sip.epygi.loc:5060
77 | Attendant for Sales | | 77@sip.epygi.com:5050
70 | AA for Marketing | | 70
11 | Diana | Line 1 | 1101@sip.epygi.loc:5060
12 | Bob Dillan | Line 2 | 1102@sip.epygi.loc:5060
13 | Paul | Line 3 | 5610@sipcenter.com:5060
14 | Michael Johnson | Line 4 | 51310@sip.fwd.com:5060
31 | for Call Park | IP Line 1 | 3330@sip.quadrosip.net:5060
32 | Common User | None | 13130, Proxy:sip.epygi.com:5060
33 | Mom | IP Line 3 | 66101@sip.epygi.loc:5060
79 | | None | 111@111.111.111.111:2123
FXO Settings
FXO Lines | Enabled | Allowed Call Type | Route Incoming Call to | PSTN Number
FXO 1 | Yes | Both incoming and outgoing calls | 31 | 442169
Back
Help
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Fig. III-2: Quadro Extension User's page

Recurrent Buttons

Throughout this guide, you will see a variety of recurrent buttons. Below is a description of these buttons.

Button	Description
Previous	This button leads back to the previous page of a fixed sequence of pages (used mainly in wizards).
Next	This button leads forward to the next page of a fixed sequence of pages (used mainly in wizards).
Cancel	This button discards the latest not yet confirmed entries.
Finish	This is the last button of a fixed sequence of pages that completes and saves the entries of an entire sequence.
Help	This button opens the help page belonging to the currently active Quadro management page.
IP-Clipboard	This button opens a window where the last inserted IP addresses are listed. It allows the user to make a quick selection of an IP address that has been previously used. This will avoid the user needing type it again. The clipboard can hold up to 10 IP addresses and a new IP address will replace the oldest one from the list.

Button	Description
Back	This button returns you to the page you were previously on.
Ok	This button confirms an operation you started before.
Yes	This button confirms an operation you chose before.
No	This button discards an operation you chose before.
Save	This button saves the settings modified on the currently active management page.
SIP Clipboard	This button opens a window where the last inserted SIP addresses are listed. It allows the user to make a quick selection of an IP address that has been previously used. This will avoid the user needing type it again. The clipboard can hold up to 10 SIP addresses and a new SIP address will replace the oldest one from the list.

Recurrent Functional Buttons

In connection with the tables, the following are the few buttons you will see:

Functional Button	Description
Add	Allows adding a new record to the displayed table. A new page will be displayed to enter any new settings.
Edit	Allows modifying the settings of the record selected by a checkbox. Normally only one (1) record may be selected. A new page will be displayed to enter the modified settings.
Delete	Deletes the selected entry(s) of a table. A warning message will ask for confirmation before deleting an existing entry.
Select All	Selects all table entry(s) for example for further deletion.
Inverse Selection	Inverses (opposites) an existing selection of table entry(s). If no entries are selected, clicking the button will select all records.
Refresh in...	May be shown in the upper right corner of a page. It displays the number of seconds remaining until the next refresh of the page will occur. It may be used to reload the page manually.

Most of the tables offer the option to sort the entries in ascending or descending order by clicking the headings of the columns. A small arrow next to the column heading indicates the direction of sorting - upward or downward. The entries of the table can be selected by using the corresponding checkboxes in order to edit or delete them.

Entering a SIP Addresses correctly

Calls over IP are implemented based on Session Initiating Protocol (SIP) on the Quadro. When making a call to a destination that is somewhere on the Internet, a SIP address must be provided.

SIP addresses needs to be specified in one of the following formats:

"display name" <username@ipaddress:port>
"display name" <username@ipaddress>
username@ipaddress:port
username@ipaddress
username

For your convenience, the following combinations can be used:

- *@ipaddress - any user from the specified SIP server
- username@* - a specified user from any SIP server
- *@* - any user from any SIP server

The display name and the port number are optional parameters in the SIP address. If a port is not specified, 5060 will be set up as the default one. The range of valid ports is between 1024 and 65536.

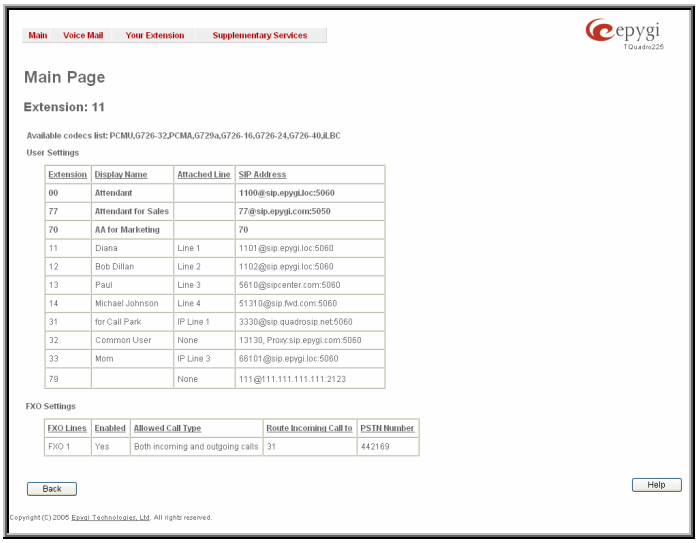
A flexible structure of wildcards is allowed. In comparison with a wildcard, the "?" character stands for only one unknown digit and the "*" character stands for any number of any digits.

Please Note: Wildcards are available for caller addresses only. No wildcard characters are allowed for called party addresses. Exceptions are addresses in the **Supplementary Addresses** table that are used by **Outgoing Call Blocking** and **Hiding Caller Information Settings** services. To use "*" and "?" alone (as non wildcard characters), use "*" and "\?" correspondingly.

Extension User's Menus

Main Page

The **Main Page** provides read only information about the extension codecs, other existing extensions and available FXO lines or ISDN trunks on the Quadro depending on the active interface.


Main
Voice Mail
Your Extension
Supplementary Services
epygi
TQuadro225
Main Page
Extension: 11
Available codecs list: PCMU,G726-32,PCMA,G729a,G726-16,G726-24,G726-40,iLBC
User Settings
Extension | Display Name | Attached Line | SIP Address
00 | Attendant | | 1100@sip.epygi.loc:5060
77 | Attendant for Sales | | 77@sip.epygi.com:5050
70 | AA for Marketing | | 70
11 | Diana | Line 1 | 1101@sip.epygi.loc:5060
12 | Bob Dillan | Line 2 | 1102@sip.epygi.loc:5060
13 | Paul | Line 3 | 5610@sipcenter.com:5060
14 | Michael Johnson | Line 4 | 51310@sip.fwd.com:5060
31 | for Call Park | IP Line 1 | 3330@sip.quadrosip.net:5060
32 | Common User | None | 13130, Proxy.sip.epygi.com:5060
33 | Mom | IP Line 3 | 66101@sip.epygi.loc:5060
79 | | None | 111@111.111.111.111:2123
FXO Settings
FXO Lines | Enabled | Allowed Call Type | Route Incoming Call to | PSTN Number
FXO 1 | Yes | Both incoming and outgoing calls | 31 | 442189
Back
Help
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The **Main Page** displays a list of available codecs for the corresponding extension, the list of other extensions on the Quadro, their Display names, the SIP registration username and line number (if attached). It also displays the FXO lines/ISDN trunks state and the destination to route incoming calls. For FXO lines, allowed call types and for ISDN trunks, trunk specific MSN numbers are displayed here.

Fig.III-1 Extension's Main Page

Voice Mail

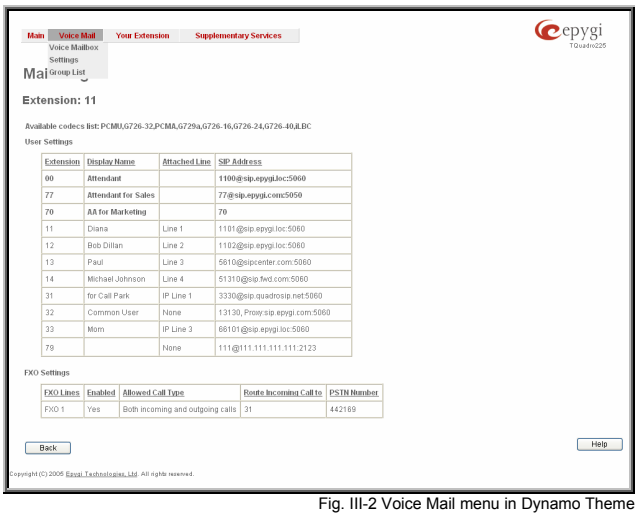
Main
Voice Mail
Your Extension
Supplementary Services
Voice Mailbox Settings
Group List
epygi
TQuadro225
Extension: 11
Available codecs list: PCMU,G726-32,PCMA,G729a,G726-16,G726-24,G726-40,iLBC
User Settings
Extension | Display Name | Attached Line | SIP Address
00 | Attendant | | 1100@sip.epygi.loc:5060
77 | Attendant for Sales | | 77@sip.epygi.com:5050
70 | AA for Marketing | | 70
11 | Diana | Line 1 | 1101@sip.epygi.loc:5060
12 | Bob Dillan | Line 2 | 1102@sip.epygi.loc:5060
13 | Paul | Line 3 | 5610@sipcenter.com:5060
14 | Michael Johnson | Line 4 | 51310@sip.fwd.com:5060
31 | for Call Park | IP Line 1 | 3330@sip.quadrosip.net:5060
32 | Common User | None | 13130, Proxy.sip.epygi.com:5060
33 | Mom | IP Line 3 | 66101@sip.epygi.loc:5060
79 | | None | 111@111.111.111.111:2123
FXO Settings
FXO Lines | Enabled | Allowed Call Type | Route Incoming Call to | PSTN Number
FXO 1 | Yes | Both incoming and outgoing calls | 31 | 442189
Back
Help
Copyright (C) 2005 Epygi Technologies, Ltd. All rights reserved.

Fig. III-2 Voice Mail menu in Dynamo Theme

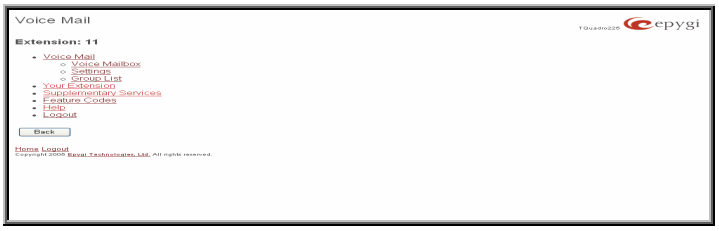

Fig. III-3 Voice Mail menu in Plain Theme

The **Voice Mail Service** provides a possibility to leave brief voice messages on the mailbox of an unavailable or busy Quadro extension. The caller hears a greeting message (configurable by the extension user) and a signal initiating the Voice Mail recording. The extension user may configure the maximum duration of the voice message, as well as the Voice Mail system activation timeout (see chapter Voice Mail Settings).

Received voice messages are stored in the Voice Mailbox. They can be accessed by the * 0 key combination from the phone handset and via Quadro management. Voice messages can to be played, marked (from GUI only), deleted, replied to (from handset only) or forwarded by the user. Messages with a facsimile (FAX) attached will be displayed in a special way in the Voice Mailbox on web management access and will be indicated by a special voice signal when accessing the message from the handset. The Incoming FAX message can be viewed and downloaded to the PC from the Voice Mailbox at Web management access as a *.tif picture file.

Quadro's Voice Mail service also allows reviewing system messages used for telephony services functionality. The voice mail greeting, incoming and outgoing blocking messages, user's name and out of office greeting can be played, recorded and restored. Greeting messages are played to the caller announcing that the called extension is unavailable and asking to leave a voice mail. Blocking messages are played when receiving or making incoming/outgoing calls from/to the restricted destination. User's name is played when surfing the Extensions Directory. The personal out of office greeting is played instead of the main greeting message, when out of office option is selected on the extension.

Voice Mailbox

Quadro provides caller the possibility of leaving voice messages when called extension is busy or unavailable. A voice mail greeting message, and a voice signal indicating voice mail recording initiation, are played back to the caller.

All voice mail functionality settings, such as enabling the greeting message, adjusting the maximal voice mail duration, voice mail system activation timeout, etc, are configurable by the user through the extension's Voice Mail Settings.

Received voice mails are stored and are accessible in the extension's Voice Mailbox. Quadro supports two ways of accessing the extension's Voice Mailbox: through the phone handset and through Quadro Web Management. With both options, the user is free to manipulate with voice mails located in the Voice Mailbox, such as playing, deleting, forwarding, etc.

When accessing the Voice Mailbox through the phone handset, additional settings to manipulate the user defined system messages are provided. The user can define their own Voice Mail Greeting, Incoming and Outgoing Blocking messages as well as the User's recorded name. Each of these system messages can be played, recorded and restored. Voice Mail Greeting messages are played back to the caller announcing that the called extension is unavailable and asking to leave a voice mail. Blocking messages are played back to the caller when receiving or making incoming/outgoing calls from/to the restricted destination. User's recorded Name is used in the Extensions Directory when the spelled name matches the entry in the directory table.

Instructions on accessing and navigating within the voice messages and Voice Mailbox Services via the phone handset are described in the Feature Codes.

Please Note: When playing newly received voice mails (via a phone handset or with the use of the **Play** button in this page) will deprive the "New" state of the voice mail.

Fig. III-4 Extension Voice Mailbox

The **Voice Mailbox** can hold **New** (not yet played) and **Old** (already played) voice mails. The **Status** column in the Voice Mailbox table indicates the current state of the voice mails. All new mails in the table are displayed in bold font. Playing a voice mail cancels both the **New** status and bold font.

Voice mails can be selected to be played, deleted, marked as important or book-marked, etc. Additionally they can be forwarded to desired email addresses.

VM free space provides information on the number of minutes/seconds of free voice mailbox space.

The following functional buttons and fields are available:

Check Mail refreshes the mailbox and updates the number of newly arrived mails (if any).

New Mails shows the number of newly arrived mails since the user's last access to the voice mailbox.

All Mails shows the number of all mails existing in the mailbox.

The **Voice Mailbox** tables display all voice mails in the mailbox:

Status - indicates whether the voice mail is **New** and not yet played. New mails are displayed in bold font.

! - indicates whether message has an urgent priority or not.

BM (bookmark) - shows marked records. The fields can include some indications (image signs) depending on the type of being marked.

Caller – is the address of the caller who left the voice mail.

Date & Time – is the voice mail receipt date and time.

Message – indicates voice mail duration (in minutes/seconds) and a speaker sign used to play (using any available media player supported by your Operation System) the received voice mail or to download the audio file to the PC.

FAX (facsimile) – indicates whether a FAX message is attached to the voice mail, and if so, displays the size of the FAX message (in KBs) and an icon used to view the incoming FAX message or download the graphical file to PC.

The column headings of the voice mail tables are created as a link. By clicking on the column heading the table will be sorted by the selected column. Upon sorting (ascending, descending) arrows will be displayed next to the column heading. Each row in the Voice Mailbox tables can be selected by a checkbox for editing, deleting or marking.

The following functional buttons serve to modify the table entries:
Forward link allows forwarding a selected voice mail to one or more email addresses with some enclosed message in the email body. The link refers to the page where email addresses should be defined (use a space or a comma to separate the mailing addresses in the text field), email subject and some message can be inserted. Voice mails will get automatically converted to the G.711 codec before being attached to the email. The Voice Mail forwarding feature is active only when Mail Service is enabled otherwise the "Mail Service is disabled" error appears.

Mark submits the values chosen out of the drop down list aside (Important or Bookmark) to the selected records.
Delete removes the selected voice mail record(s).
Select All checks all existing entries in the table.
Inverse Selection inverses the current selection (if no records are selected, clicking on inverse selection will check all records).

To Play a Voice Mail
1. Click on the speaker icon of the corresponding voice message.
2. Depending on you browser's settings the .wav file will be played directly or an application will ask you to save the .wav file on the local PC. In the second option, please specify the path and run the media file from the specified location to play it.

To Mark a Voice Mail Record
1. Select the checkbox of the corresponding record in the **Voice Mailbox** table that should to be marked. Press **Select all** if all extensions should to be marked.
2. Select the desired marking type from the **Mark** drop down list.
3. Select the **Mark** button to initiate the marking operation. Depending on the selected marking type the record(s) will show an image sign in the corresponding **BM** field.

To Delete a Voice Mail Record
1. Select the checkbox of the corresponding record(s) in the **Voice Mailbox** table that should to be deleted. Click on **Select all** if all records should to be deleted.
2. Select the **Delete** button.
3. Confirm the deletion with **Yes**. The selected voice messages will be deleted. To abort the deletion and keep the messages in the inbox, select **No**.

Voice Mail Settings

The **Voice Mail Settings** permits enabling the **Voice Mail Service** for the callers if the called extension is not available or does not answer. The voice mail system will be activated allowing the caller to leave a voice message. This page also provides information on the voice mailbox settings such as maximal mail message duration, voice mail indication method when a new voice mail arrives, various settings for the voice mailbox as well as a possibility to send voice mails via e-mail.

Please Note: **Voice Mail Settings** are only available when the Voice Mailbox is enabled on the extension. If you find Voice Mail Settings are unavailable please refer to your system administrator.

The **Voice Mail Settings** page offers the following input options:

Maximum mail message duration lists the possible values for the maximum mail duration (counted in minutes) during which a voice mail will be recorded. The **Unlimited** selection allows voice message recording as long as the user's space remains.

Ask password before granting local access to mailbox protects local access of the user's voice mailbox. If the checkbox is checked a user password will be required to access the voice mailbox via * 0 digit combination.

Ask password before granting remote access to mailbox protects remote access of the user's voice mailbox. If the checkbox is checked a user password will be required to access the voice mailbox when reaching it through the Auto Attendant.

Send welcome message enables a welcome message to be played to the user when accessing the mailbox locally.

Play Voice Mail Help is an optional setting that plays voice mail help instructions to the user when entering the Voice Mailbox. This option guides the user through the mailbox, explaining how to play and delete the voice mails as well as modifying system messages.

Automatically play messages will auto play of all voice mails. Whenever entering the voice mailbox, the system will sequentially play the date/time when the message was received followed by the voice mail itself in the order sorted by the priority level (starting with the message in highest priority) or. If no priority is specified, they will be played in the order in which messages were received, i.e. starting with first (oldest) message. When the last message is played, the Voice Mail help will be replayed.

Send mails count information message announces the number of **New** (unread) voice messages in the mailbox when entering the mailbox.

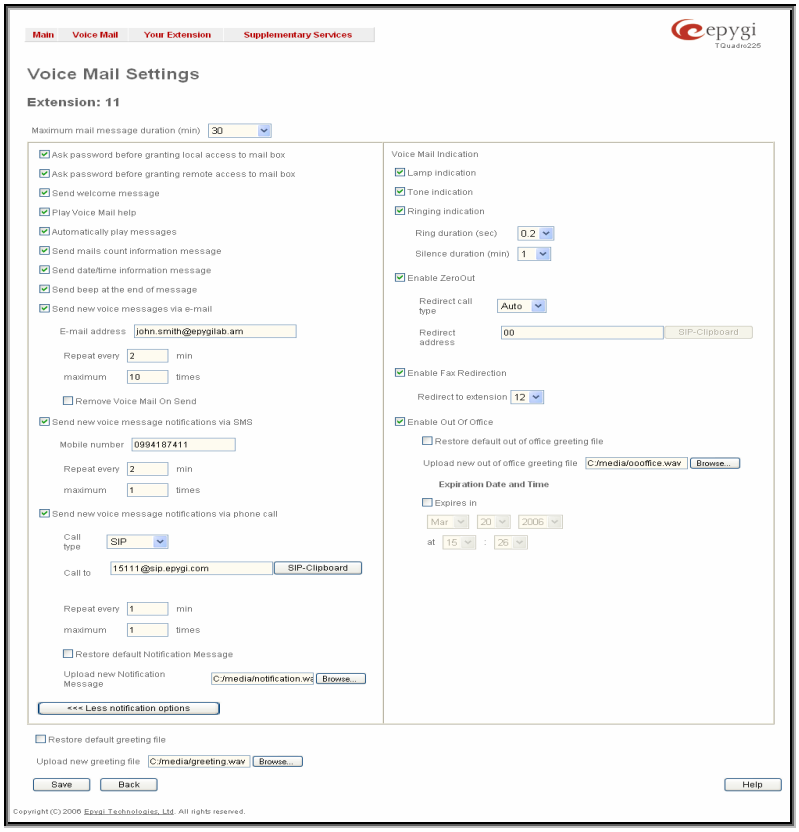

Fig. III-5 Voice Mail Settings page

Send date/time information message announces the time and date a voice message was received and is played before every voice message.

Send beep at the end of message enables an optional parameter that activates a "beep" sound after each played voice message.

Send new voice message via email is an option to send new voice mail files via e-mail to the defined recipients. Mails will be automatically converted to the Windows wave (PCMU) format before being attached to the e-mail. Checkbox activates the following input options:

Email Address requires the e-mail address(es) of the person(s) that should to receive the newly arrived voice mails on their e-mail account(s). Use a space or a comma to separate the mailing addresses in the text field.

The next two fields are used for retransmission of the voice mail via email. Number of times text field requires the maximum number of times the voice mail will be delivered via email to the recipient within the interval (in minutes) defined in the **Repeat every** text field. If the voice mail is required to be sent only once, insert "1" in **Repeat every** text field and "0" in the Number of times text field.

Remove Voice Mail on send removes the voice mail from the user mailbox after sending it to the e-mail recipient(s).

Please Note: This service will work only when **System Mail** is enabled on the Quadro. Contact your system administrator if you have problems with voice mail delivery via email.

Send new voice message notification via SMS allows the voice mail notification delivery via SMS to the defined mobile number. Checkbox activates the following input options:

Mobile Number text field requires the destination's mobile number.

The next two fields are used for retransmission of SMS notifications. The number of times text field requires the maximum number of times the notification should be delivered to the recipient within the interval (in minutes) defined in the **Repeat every** text field. If the notification is required to be sent only once, insert "1" in **Repeat every** text field and "0" in the Number of times text field.

Please Note: This service will work only when **SMS Service** is enabled on the Quadro. Contact your system administrator if you have problems with voice mail notifications delivery via SMS.

Send new voice message notification via phone call enables the voice mail notification delivery via a phone call to the defined phone number. The checkbox activates the following input options:

Call Type drop down list includes the available call types:

- PBX - local calls to Quadro extensions;
- SIP – calls through a SIP server;
- Auto – for undefined call types. The destination (independent on whether it is a PBX number or SIP address) will be reached through Routing;
- Callback – automatic call to the voice mail author. This can be used as a notification that the recipient has received the voice mail but has not yet played it.

Call To text field requires the destination's phone number depending on the selected call type. For **Callback** call type, no destination's phone number is required.

The next two fields are used for retransmission of phone notifications. Number of times text field indicates the maximum number of times the notification should be delivered to the recipient within the interval (in minutes) defined in the **Repeat every** text field. If the notification is specified to be sent only once, insert "1" in **Repeat every** text field and "0" in the Number of times text field. For **Callback** call type, the first notification is sent to the voice mail author after the first expiration of the interval defined in the **Repeat every** text field. For calls with call type different from Callback, the first notification will be sent immediately.

Restore default Notification Message restores the default notification message. If the checkbox is selected, the file upload will be disabled.

Upload new Notification Message will show the attached notification file selected by the current extension. Please note that a different notification message can be uploaded in case this service serves as a notification to the extension user (to inform about the new voice mail received) or if it serves as a notification for the voice mail author to be informed that the message has been received by the Quadro but is not yet played by the extension user. The uploaded file needs to be in the PCMU wave format, otherwise the system will prevent uploading with the "Invalid audio file, or format is not supported" warning message. The system also prevents uploading in case insufficient space is available on Quadro for the corresponding extension and gives a "You do not have enough space" warning.

Browse browses for the notification file that must be in PCMU wave format.

Download Notification Message appears only if a file has been uploaded previously. The link is used to download the audio file to the PC and opens the file-chooser window where the saving location can be specified.

Voice Mail indication enables user notifications for new voice messages in the mailbox. The checkbox offers the following three types of voice mail indications:

Lamp indication– depending on the type of phone a visual blinking signal will announce a new voice mail.

Tone indication – the user will hear a specific tone when lifting the handset.

Ringing indication – the user will be able to create a specific ring pattern when a new voice mail has arrived. The checkbox enables the following ringing pattern configuration parameters:

- **Ring duration** – the available ring durations (counted in seconds).
- **Silence duration** – the available silence durations (counted in minutes).

The **ZeroOut** voice mail feature allows a caller that has reached the called extension's voice mailbox to accelerate the automatic redirection feature instead of leaving a message in the extension's Voice Mailbox. To activate this feature, the caller should dial 0 digit (see Feature Codes) during the voice mail greeting which invites the caller to leave a message. The caller will then be automatically transferred to the destination specified in this page.

Enable ZeroOut checkbox selection enables the ZeroOut feature and activates the following fields to be inserted:

Redirect Call Type drop down list includes the available call types:

- PBX - local calls between Quadro extensions and the Auto Attendant
- SIP – calls through a SIP server
- PSTN – calls to PSTN
- Auto – used for undefined call types. Destination (independent on whether it is a PBX number, SIP address or PSTN number) will be reached through Routing.

The **Redirect Address** text field requires the destination address where the caller should be automatically forwarded to if activating the ZeroOut feature.

The **Enable FAX Redirection** checkbox is used to redirect the incoming FAX (facsimile) when the FAX tone is detected after Voice Mail has been activated. The checkbox selection enables the **Redirect to extension** drop down list where extensions with enabled FAX Support are listed and is used to select the extension where the incoming FAX should be forwarded.

The **Enable Out of Office** checkbox allows activation of the Out of Office message which acts as an optional Voice Mail Greeting message in the period while the user is out of office, on vacations, etc. When this checkbox is selected, a user-defined Out of Office message will be played (if uploaded or recorded from the phone handset, otherwise a default Out of Office message will be used) to the caller which reached the called extension's Voice Mailbox.

Restore default Out of Office file restores the default Out of Office message file. If the checkbox is selected, the file upload will be disabled.

Upload new Out of Office Greeting file will show the attached Out of Office message file selected by the current user. The Out of Office message file will be played to a caller when entering the voice mail system. The uploaded file needs to be in PCMU wave format, otherwise the system will prevent its uploading and will give the "Invalid audio file, or format is not supported" warning message. The system also prevents uploading when

insufficient space is available on Quadro for the corresponding extension. In this situation, the "You do not have enough space" warning will be received. Optionally, the Out of Office message can be recorded from the phone handset (see Feature Codes).

Browse browses for the Out of Office message file that must be in PCMU wave format.

Download Out of Office Greeting file appears only if some file has been uploaded previously. The link is used to download the audio file to the PC and opens the file-chooser window where the saving location can be specified.

Expiration Date and Time selection is used to set the expiration date and time of the Out of Office message validity. When the expiration date/time expires, the Out of Office message automatically gets disabled and Voice Mail regular greeting gets activated again.

Restore default Greeting file will restore the default greeting file. If the checkbox is selected, the file upload will be disabled.

Upload new greeting file will show the attached greeting file selected by the current user. The greeting file will be played to a caller when entering the voice mail system. The uploaded file needs to be in PCMU wave format, otherwise the system will prevent uploading and the "Invalid audio file, or format is not supported" warning message will be received. The system also prevents uploading in case insufficient space is available on Quadro for the corresponding extension. In this situation, the "You do not have enough space" warning will be received. Optionally, a greeting file can be recorded from the phone handset (see Feature Codes).

Browse browses for the greeting file that must be in PCMU wave format.

Download Greeting File appears only if a file has been previously uploaded. The link is used to download the audio file to the PC and opens the file-chooser window where the saving location can be specified.

Group List

Group List allows you to define Groups with the specified addresses inside. The **Group List** is used to send or forward voice messages (see Feature Codes) to the number of addresses simultaneously. Groups may consist of a variety of PBX and SIP addresses.

The **Group List** page consists of a table where all defined Group Keys and the corresponding addresses are listed.

Press on a link in the **Addresses** column to access the **Address List for the Group** page and to modify the addresses of the corresponding group. If Group doesn't include addresses, "no address is available" will be displayed in the **Addresses** column.

The **Add** functional button opens the **Group List - Add Entry** page where a new Group Key can be defined.

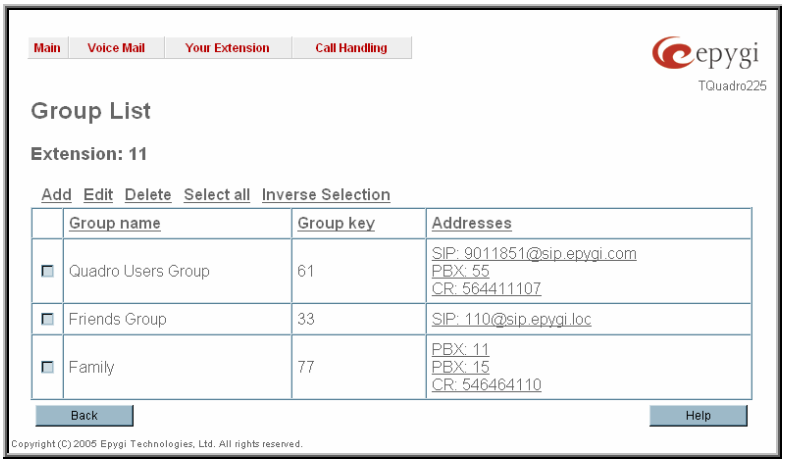

Fig. III-6 Group List page

The **Group List - Add Entry** page consists of two text fields used to insert the **Group Key** and the **Group Name** (optionally). The **Group Key** should include numeric characters only and should be unique in the Group List table.

Please Note: Groups with keys equal to extension numbers on Quadro have a higher priority and will be applied when sending or forwarding a voice message to the corresponding destination.

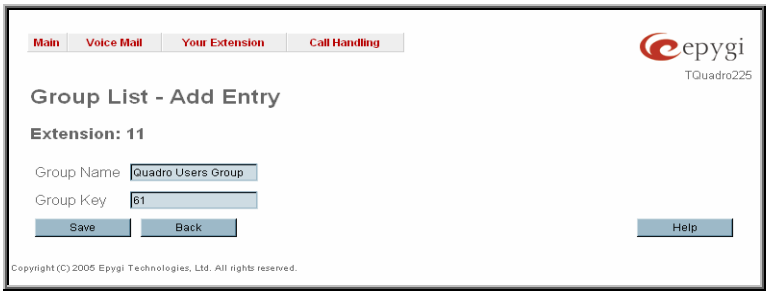

Fig. III-7 Add Group page

Fig. III-8 Addresses List page

The **Address List for the Group** page contains a table of addresses where new address may be added to the group and existing ones may be edited or deleted.

The **Add** functional link moves to the **Address List for the Group – Add Entry** page where new address may be defined.

Address List for the Group – Add Entry page consists of he following components:

Call Type lists the available call types:

- PBX - local calls between Quadro extensions and Auto Attendant
- SIP – calls through a SIP server
- Auto – used for undefined call types. The destination (independent on whether it is a PBX number or SIP address) will be reached through Routing.

The **Address** text field is used to define the address that ought to be included in the group. The value in this field is strictly dependent on the Call Type defined in the same named drop down list. If the **PBX** call type is selected, the Quadro extension number should be defined in this field. For the **SIP** call type, the SIP address should be defined.

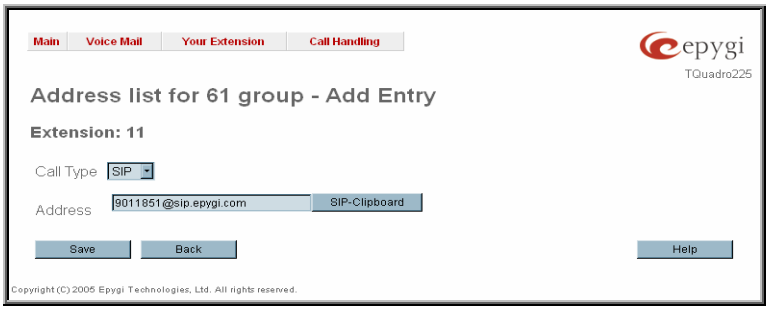

Fig. III-9 Add Address page

To Configure a Group

1. Press Add in the Group List page. **Group List - Add Entry** page will be displayed in the browser window.
2. Fill in the **Group Key** and **Group Name** (optionally) in the same named field.
3. Press **Save**.
4. Click on the link in the row corresponding to the newly created Group.
5. Press Add in the **Address List for the Group** page. **Address List for the Group – Add Entry** page appears.
6. Choose a **Call Type** from the corresponding drop down list.
7. Define the group member address in the **Address** text field.
8. Press **Save**.

Your Extension

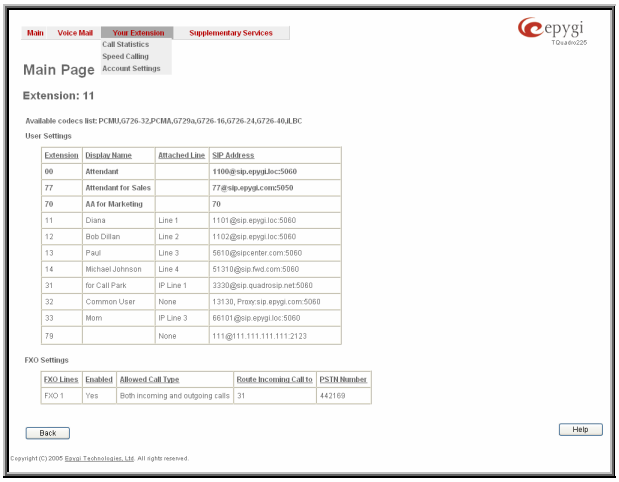

Fig.III-10 Your Extension menu in Dynamo theme

Fig. III-11 Your Extension menu in Plain Theme

Call Statistics

The **Call Statistics** page collects the call events and their parameters over the Quadro, i.e. incoming and outgoing calls reporting. It contains three tables and provides reports on successful, not successful and missed incoming and outgoing calls for the current extension only. This page also allows you to filter the collected **Call Statistics** based on various criteria. The search components are as follows:

The **From** and **To** text fields are used to search by date and time. The data must be inserted in the following format: dd-mm-yyyy hh:mm:ss or dd-Mon-yyyy hh:mm:ss. The **From** field must indicate an earlier date and time from that which is indicated in the **To** field. If the entered data is not an earlier date and time, the "Minimal date should be less than maximal date" error message prevents statistics from filtering.

The **From** and **To** drop down lists are used to search by duration. The duration needs to be specified from the listed values. The **From** field must indicate a shorter duration than the **To** field. If the entered data is a larger duration, the "Minimal duration should be less than maximal duration" error message prevents statistics from filtering.

Called Phone requires the called party's SIP address, extension or PSTN number as a search criteria.

Calling Phone requires the caller party's SIP address, extension or PSTN number as a search criteria. For both **Called** and **Calling Phone** wildcards are available (see chapter Entering a SIP Addresses correctly). If the defined caller or called addresses are inserted incorrectly the "Calling (Called) address is incorrect" error message will prevent filtering.

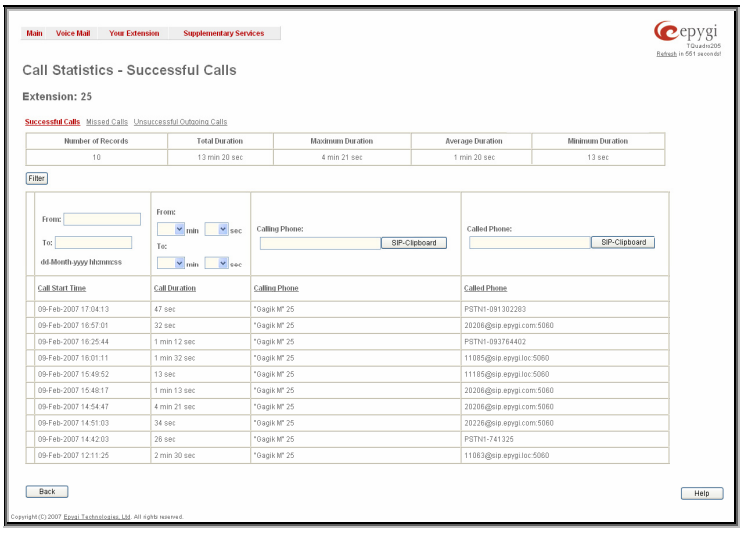

Fig. III-12 Extension's Call Statistics page

The **Call Statistics - Successful Calls, Call Statistics - Missed Calls** and **Call Statistics - NonSuccessful Calls** tables list the successful, missed and not successful incoming and outgoing calls and their parameters (Call Start Time, Call durations, Calling and Called phones) for each corresponding extension. Each column heading in the tables are created as links. By clicking on a column heading, the table will be sorted by the selected column. After the sorting (ascending or descending) arrows will be displayed next to the column heading.

Number or records displays the current number of statistics entries in the table. For successful calls, **Total Duration, Maximum Duration, Average Duration** and **Minimum Duration** are displayed at the top of the table.

The **Filter** performs a search procedure according to the selected criteria. The search may be conducted with several criteria at the same time.

The **Download Call Statistics** links are available below all Call Statistics tables and allows you to download the displayed call statistics in a text file.

To Filter the Statistics

1. Enter the desired search criteria.
2. Click on the **Filter** button to search call reports within the **Call Statistics** table.

Please Note: To return to the complete statistics table clear all search criteria and press **Filter**.

Speed Calling

The **Speed Calling** service of Quadro simplifies dialing to the called destination. It provides short digit combinations for frequently dialed phone numbers.

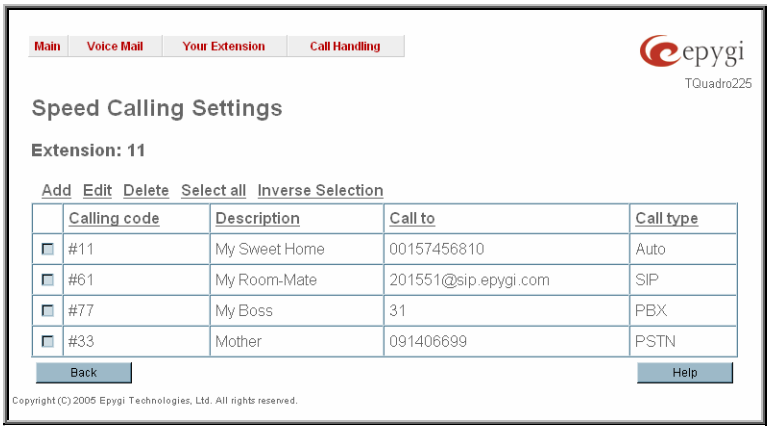

Fig. III-13 Speed Calling Settings page

The **Speed Calling Settings** page lists all defined **Calling codes** with following parameters:

Add opens the **Speed Calling Settings-Add Entry** page where the user may add a preferred key combination for Speed Calling.

Edit opens the **Speed Calling Settings-Edit Entry** page where the Speed Calling codes may be edited. The page includes the same components as the **Add Speed Calling Code** page.

If no records are selected and the user attempts to **Edit** or **Delete** them, the "No records selected" error message will appear.

The **Speed Calling Settings - Add Entry** page includes the following fields and buttons:

Call Type lists the available call types:

- PBX - local calls between Quadro extensions and Auto Attendant
- SIP – calls through a SIP server
- PSTN – calls to PSTN
- Auto – used for undefined call types. The destination (independent on whether it is a PBX number, SIP address or PSTN number) will be reached through Routing.

The **Calling Code (#)** requires a key combination to dial the destination phone number. Only numeric characters are allowed for this field. If nonnumeric symbols are entered and the **Save** button is selected, "Incorrect calling code: no symbol characters allowed" will appear. This field is limited to two digits. If the calling code already exists in the **Speed Calling Codes** table, the "Speed Calling Code already exists" error will appear when you select **Save**.

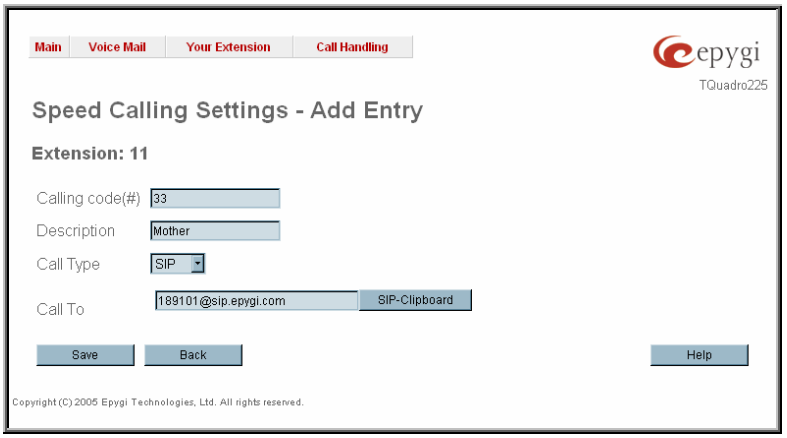

Fig. III-14 Speed Calling Settings – Add Entry page

Description allows entering a short description about the called destination or simply the username of the remote party.

Depending on the selected call type the **Call To** text field requires the SIP address, extension or PSTN number that has to be dialed whenever the calling code is used. Two digits should be inserted in the **Call To** field for the **PBX** call type. A SIP address should be entered for **SIP** call type. Only SIP registration username can be inserted here to call to the SIP user registered on the same SIP server that the current extension is registered on. If the SIP server hostname is omitted, the system will automatically set the current extension's registration server hostname instead. A PSTN number should be inserted for PSTN call type. The PSTN number length depends on the area code and phone number. For the PSTN call type, the symbols ",", "p" and "P" are available to be inserted in this field. These symbols are used to insert a 1 second long pause which might be required by the PSTN dialing rules.

To Add a Speed Calling Code

1. Press the **Add** button on the **Speed Calling Settings** page. The **Speed Calling Settings - Add Entry** page will appear in the browser window.
2. Select the call type from the **Call Type** drop down list.
3. Choose a **Calling Code** and enter the **Description** for the called party.
4. Enter the destination SIP address, extension or PSTN number (dependant on the chosen call type) in the **Call To** text field according to the entering rules.
5. To create the **Speed Calling Code** click on **Save**.

To Edit a Speed Calling Code

1. Select the checkbox of the corresponding record that has to is be edited in the **Speed Calling Codes** table
2. Press the **Edit** button on the **Speed Calling Settings** page. The **Speed Calling Settings-Edit Entry** page will appear in the browser window.
3. Change the desired fields.
4. To save the modifications click on **Save**, to keep the previous data, select **Cancel**.

To Delete a Speed Calling Code

1. Select the checkbox of the corresponding record that should to be deleted from the **Speed Calling Code** table. Press **Select all** if all records re to be deleted.
2. Press the **Delete** button on the **Speed Calling** page.
3. Confirm the deletion by clicking the **Yes** button. The speed calling code with its parameters will be deleted. To abort the deletion and to keep the original record in the list, select **No**.

Account Settings

The **Account Settings** page provides information on the extension display name, allows changing the user password, enabling user password protection for incoming/outgoing calls and downloading/uploading of a file with the user-defined voice greetings. All parameters listed on this page may be modified and submitted. This page consists of the following components:

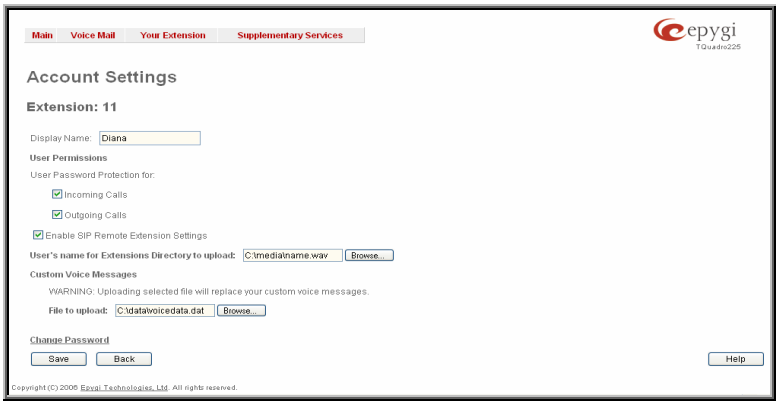

Fig. III-15 Extension Account Settings page

Extension shows a non-editable parameter providing information about the current user extension number.
Display Name defines an optional parameter used to identify the caller. Usually the display name appears on the phone display if a call is placed or a voice mail is sent. The field is not limited regarding symbol usage but its length is limited to twenty characters.
Password Protection for:

- **Incoming Calls** enables password protection for incoming calls. If the service is enabled a user password is required to be able to accept the incoming calls.
- **Outgoing Calls** enables password protection for outgoing calls. If the service is enabled a user password is required to be able to make calls.

Enable SIP Remote Extension Settings checkbox is only visible when the system administrator has activated the **SIP Remote Extension** service for the corresponding extension at least one time. With this checkbox, the extension user may enable/disable the **SIP Remote Extensions** functionality. The administrator defines all settings of the SIP Remote Extension feature.

Please Note: If you find the **Enable SIP Remote Extension Settings** checkbox missing on this page, please consult with your system administrator for the first-time activation of the **SIP Remote Extension** service on the corresponding extension.

The **User's name for Extensions Directory to upload** text field is used to enter the path where the file with the user's name is located. If the file with the user's name is browsed with the help of file-chooser, this field displays the path of the browsed file. The **Browse** button is used to browse for the file with the user's name. The user's name also can be modified from the handset and will be played when the spelled name matches the name configured for the corresponding user.

Please Note: A user cannot be reached through the Extensions Directory until their name is recorded/uploaded into the Extensions Directory.

The **Download User's name** link is used to download the user-defined wave file with the user's name.

The **File to upload** text field is used to type in the path where the backed up file with voice messages is located. If voice greetings are browsed with the help of a file-chooser, this field displays the path of the browsed file. The **Browse** button is used to browse for the previously downloaded file with custom voice messages.

Attention: Uploading the selected file will replace your custom voice messages. Uploading custom messages downloaded from the other Quadro will overwrite messages that have not been configured by the user with the current device defaults. This means that if some default messages were used on one Quadro, they may be completely different on another Quadro after uploading of the voice data.

The link **Download custom voice messages** appears only when there are user-defined custom greetings recorded. It is used to download a compressed file with all user specified voice messages. The link opens the file-chooser window to specify the saving location.

The link **Change Password** refers to the page where the user password can be changed.

The **Change Password** page requests the following information:
Old Password requires the existing password for the extension access (this field is not displayed when the administrator updates the user's password from the User specific configuration page).
New Password is used to change the existing one. The password should only consist of digits with a length of zero to twenty (0-20) digits.
Confirm New Password is used to confirm the new password. If the entered **New Password** does not match to the new one entered in the **Confirm Password** field the "The passwords do not match. Please try again" error warning will appear.

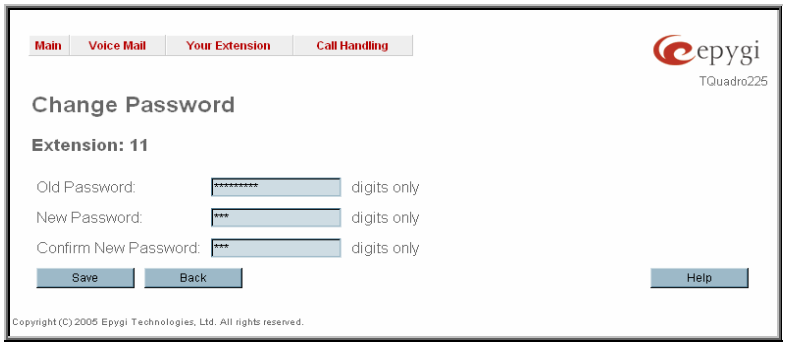

Fig. III-16 Change Password page for extension access

Please Note: It is highly recommended to define a proper and non-empty password on this page if the extension is being used for the Call Relay service from the Quadro's Auto Attendant.

Supplementary Services

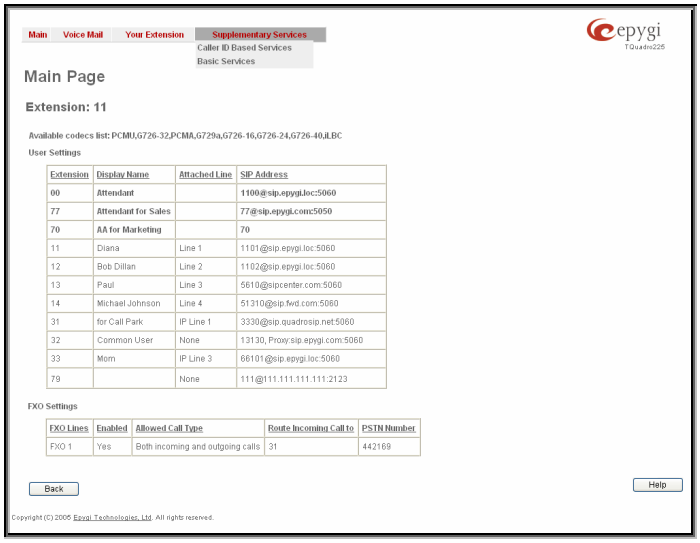

Fig. III-17 Supplementary Services menu in Dynamo Theme

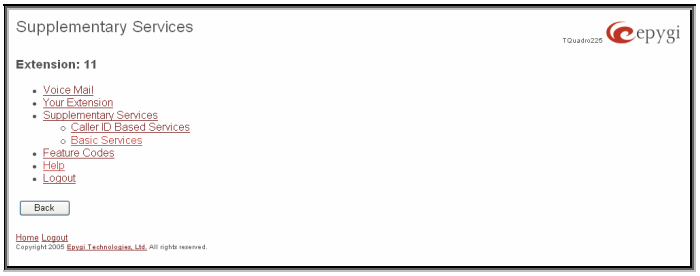

Fig. III-18 Supplementary Services menu in Plain Theme

Caller ID Based Services

The **Caller ID Based Services** page provides options to configure a set of telephony settings from the same page. Call Forwarding, Incoming and Outgoing Call Blocking, Hiding Caller Information, Call Hunting, Many Extension Ringing, Distinctive Ringing and Intercom settings are configurable from this page.

The **Caller ID Based Services** page contains a table listing all caller or called destinations and the ON/OFF status of the caller ID based services. The caller or called destination numbers are used to configure caller ID based services based. The column headings in the table are designed as links. By clicking on a column heading, the table will be sorted by the selected column. After sorting, (ascending or descending) arrows will be displayed next to the column heading.

The table also has **Any Address** entry that is undeletable. It is used to configure caller ID based services for all addressed. When adding a new caller address **Any Address** is changed to **Other Addresses**. Now there could be different configurations for the specified addresses and for all others.

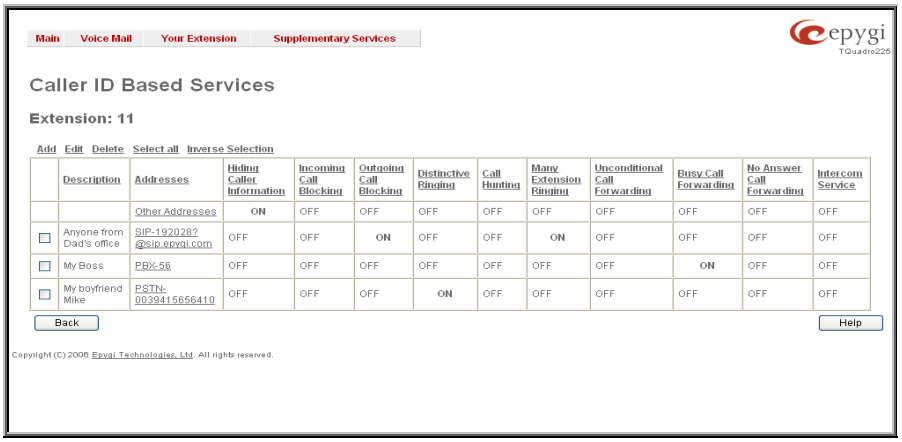

Fig. III-19 Caller ID Based Services page

Add opens the **Caller ID Based Services** - **Add Entry** page where a new address can be defined. This page consists of the following components:

The **Description** text field requires optional information about the address owner.

Call Type lists the available call types:

- PBX - local Quadro extensions and Auto Attendant
- SIP – caller or called destinations reached through a SIP server
- PSTN – caller or called destination dialed from or to PSTN
- Auto – used for undefined call types. In this case, for incoming calls from specific address, configuration of caller ID based services will apply either to PBX, SIP or PSTN callers. For outgoing calls, the called destination will be reached through Routing.

Address requires a SIP address (see chapter Entering a SIP Addresses correctly), an extension or a PSTN number, for whom supplementary services should be applied. If the address already exists in the table, selecting **Save** will give the error "Caller address already exists". A wildcard is allowed in this field (see chapter Entering a SIP Addresses correctly). Entering "*" as PBX or PSTN addresses will apply configuration of supplementary services to all extensions or PSTN users.

Two digits should be inserted in the **Address** text field for the PBX call type. The PSTN number length depends on the area code and phone number.

Fig.III-20 Caller ID Based Services – Add Entry page

When clicking on the **Address** in the **Caller ID Based Services** table, the caller ID based services configuration pages for the corresponding extension will be displayed.

The **Caller ID Based Services for Address** page consists of two frames. In the left frame all caller ID based services are listed. Clicking on the corresponding caller ID based service, its settings will be displayed in the right frame.

Please Note: Remember to save changes before moving between the caller ID based services configuration pages.

Fig. III-21 Caller ID Based Services for Address page

Below are the instructions to configure each caller ID based service available to the user.

To Configure Caller ID Based Services

1. Press the **Add** button on the **Caller ID Based Services** page. The **Caller ID Based Services - Add Entry** page, where new addresses can be defined, will appear in the browser window.
2. Define an optional **Description** of the address.
3. Select the call type from the **Call Type** drop down list.
4. Enter the SIP address, extension or PSTN number (dependant on the chosen call type) in the **Address** text field according to the entering rules.
5. To add an address to the **Caller ID Based Services** table, click **Save**.
6. Click on the newly created **Address** in the **Caller ID Based Services** table to open the **Caller ID Based Services for Address** page.
7. From the left frame, choose a Caller ID Based Services. From the right frame, enable, configure and adjust the corresponding service. Do this for each service. Remember to **Save** the configurations each time moving between the Caller ID Based Services configuration pages.

To Edit Caller ID Based Services

1. Select the checkbox of the corresponding address that has to be edited in the **Caller ID Based Services** table. The **Caller ID Based Services - Edit Entry** page will appear in the browser window.
2. Change the **Description** of the address, if needed.
3. Change the **Call Type** and the **Address** defined in the corresponding fields.
4. **Save** changes.
5. If the reconfiguration of **Caller ID Based Services** is needed, click on the corresponding **Address** in the **Caller ID Based Services** table to open the **Caller ID Based Services for Address** page.
6. From the left frame, choose a Caller ID Based Services. From the right frame, change the corresponding service settings, if required. Remember to **Save** the configurations each time moving between the Caller ID Based Services configuration pages.

Hiding Caller Information

The **Hiding Caller Information** service is used to hide Quadro user information depending on the called destinations. When this service is activated, **Unknown** or **Anonymous** (or similar text, depending on the type of the phone) will be displayed on the called phone when the current user of Quadro makes outgoing calls to the selected destination.

Attention: Using the "Block Last Caller" operation from the handset for the caller with the hidden caller ID (for example, anonymous@anonymous or similar) may block all unknown callers.

Fig. III-22 Hiding Caller Information page

The **Enable Service** checkbox selection hides the current extension's information when calling to the corresponding **Address** listed in the Caller ID Based Services table.

Please Note: Even if the **Hiding Caller Information** service is enabled, it shall work only for internal PBX calls and SIP calls. If you call through FXO/ISDN port to a PSTN number, the called party will still see your caller ID. To hide your caller ID for PSTN destinations, contact your PSTN operator.

Incoming Call Blocking

Incoming Call Blocking allows blocking unwanted incoming calls for a Quadro extension. This page provides the necessary settings for incoming call blocking. It indicates if the service is enabled for the particular caller and whether or not the custom message will be used to inform the caller about the call being blocked. If the service for the particular caller has been enabled by the administrator and has been stated as protected, the user cannot disable it.

Please Note: The administrator can protect the service from being disabled by you. Contact the administrator if callers complain that they cannot reach you.

The **Enable Service** checkbox selection blocks all calls to the current extension using the corresponding **Address** listed in the Caller ID Based Services table where the Incoming Call Blocking service is configured.

The **Send Message to Caller Party** checkbox is available when the service is enabled and initiates a message to inform the caller that their line has been blocked. Otherwise, the calling party will be disconnected without notification.

The **Restore Default Blocking Message File** restores the default incoming call blocking message if another user-defined file has been previously selected. When the checkbox is selected, the file upload possibility will be disabled.

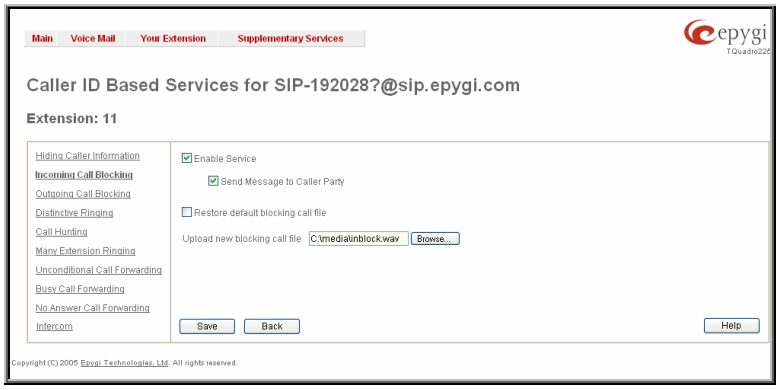

Fig. III-23 Incoming Call Blocking page

The **Upload New Blocking Message File** requires the name of the desired voice message file. The file needs to be in PCMU wave format, otherwise the system will prevent uploading it and the "Invalid audio file, or format is not supported" warning message will be received. The system also prevents uploading if there is not enough space available for the corresponding extension. You will then receive the "You do not have enough space" warning.

Browse is used to browse custom voice message used for incoming call blocking.

The **Download Voice Message File** link only appears if a file has been previously uploaded. The link is used to download the audio file to the PC and opens a window where the saving location can be specified.

Outgoing Call Blocking

Outgoing Call Blocking allows blocking unwanted outgoing calls for a Quadro extension where the destination **Address** service is configured. This page provides the necessary settings for the outgoing call blocking service. It indicates whether service is enabled for the particular caller and whether or not a custom message will be used to inform caller about the call being blocked. If the service a particular caller has been enabled by administrator and has been stated as protected, the user cannot disable it.

Please Note: The administrator can protect the service from being disabled by you. Contact the administrator if you have problems establishing a certain call.

The **Enable Service** checkbox selection blocks all calls to the corresponding **Address** listed in the Caller ID Based Services table associated to the corresponding extension.

The **Send Message to Caller Party** checkbox is available when service is enabled and it initiates a message to inform the caller that their line has been blocked. Otherwise, the calling party will be disconnected without a warning.

The **Restore Default Blocking Message File** restores the default outgoing call blocking message if another user-defined file has been previously selected. When the checkbox is selected, the file upload possibility will be disabled.

The **Upload New Blocking Message File** requires the name of the desired voice message file. The file needs to be in PCMU wave format, otherwise the system will prevent uploading it and "Invalid audio file, or format is not supported" warning message will be received. The system also prevents uploading if there is not enough space available for the corresponding extension. The "You do not have enough space" warning will then be received.

Browse is used to browse custom voice message used for outgoing call blocking.

The **Download Custom Blocking Message File** link appears only if a file has been previously uploaded. This link is used to download the audio file to the PC and opens a window where the saving location can be specified.

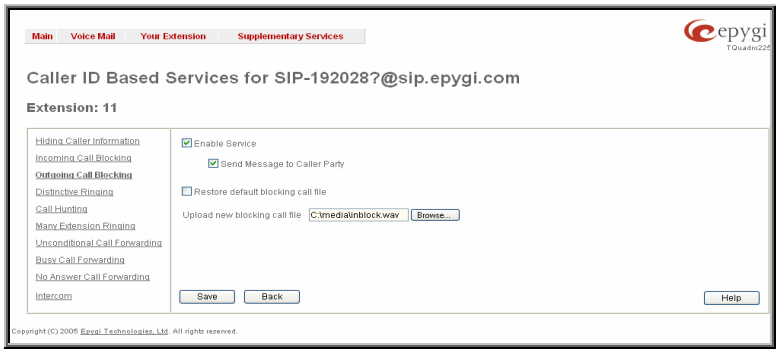

Fig. III-24 Outgoing Call Blocking page

Distinctive Ringing

The **Distinctive Ringing** service of Quadro allows you to assign different ringing patterns to individual callers. The **Distinctive Ringing Settings** page provides the necessary settings to receive a distinct ring depending on the caller's address.

Attention: This feature is not functional on IP phones (lines) extension is assigned to.

The **Enable Service** checkbox enables the service. Other components on this page are available only when this checkbox is selected.

Nick Name requires the callers nickname (if any).

Ringing Pattern lists the possible ringing patterns that may be assigned to a specified caller.

Preview allows you to play the ringing pattern directly or to save it to a PC.

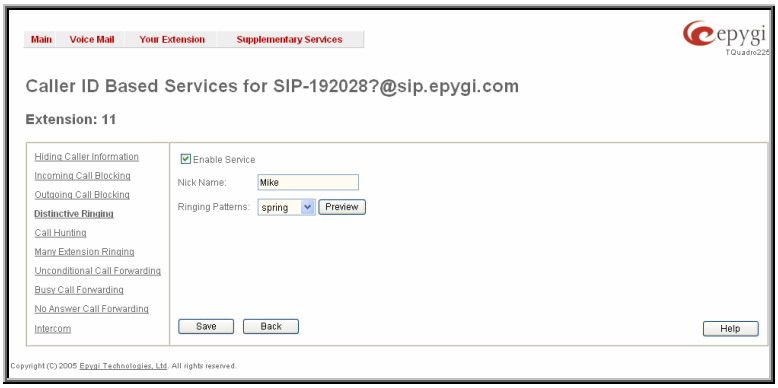

Fig. III-25 Distinctive Ringing page

Please Note: All phones attached to the extensions in the Many Extension Ringing/Call Hunting table will ring with the pattern defined for the individual caller to that extension.

Call Hunting

The **Call Hunting** service provides the possibility of an incoming call consecutively ringing on several extensions depending on the calling party. The **Call Hunting** page contains a table where all the participants in the call hunting group for the corresponding extension should be defined.

Attention: By configuring the **Call Hunting** service, **Forwarding** and **Many Extensions Ringing** automatically will be disabled on the current extension.

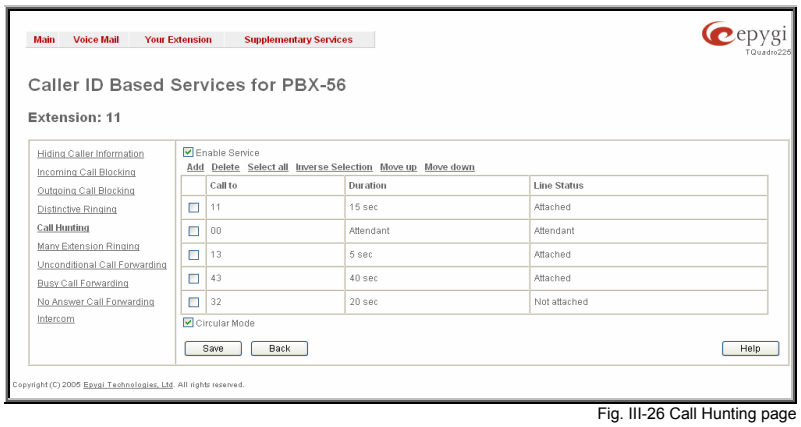

Fig. III-26 Call Hunting page

Selecting **Enable Service** activates the Call Hunting service on the current extension.

The table displayed here lists the extensions where the call must be consecutively duplicated in case of a call from the corresponding caller. **Line Status** indicates if the extension is **Attached**, **Not Attached** or Attendant. An extension cannot ring if it is **Not Attached**. The administrator must attach it to the line from the **Extensions Management** page.

When the order of entries in the **Call To** table is defined in the consecutive ringing order, the **Move Up/ Move Down** becomes available. This will move the checked **Call To** extension either one level up or down.

Add opens the **Add Entry** page to add called extensions (an attendant or a user extension). It has manipulation radio buttons to select the type of extension to be added to Call Hunting. It contains the following components:

- The **Call To** drop down list contains Quadro's attendant or user extensions, depending on the radio button selected. It is possible to add the same extension more than once to the **Call To** table. The extension will ring, depending on the order, as often as configured.
- The **Duration** drop down list is only available for user extensions only. It is used to select the period (in seconds) for which the corresponding user's extension should ring.

When saving the call hunting configuration, a message will notify the user that the Many Extensions Ringing and the Call Forwarding services have been disabled.

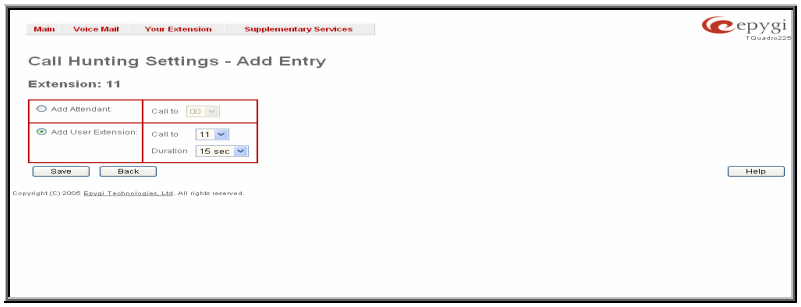

Fig. III-27 Call Hunting – Add Entry page

The **Circular Mode** checkbox enables the call hunting start over when the last extension in the Call Hunting table has been called and there is still with no answer. When this checkbox is not selected, call hunting will terminate once the last extension in the Call Hunting table does not answer the call, the incoming call will then be redirected to the Voice Mailbox of the extension call it originally called (if enabled) or it will be disconnected.

Note: The Voice Mail Service will be activated on the extension initiating the Call Hunting only after all extensions in the Call Hunting table are called at least once, regardless the **No Answer Timeout** configured from the Basic Services page.

Many Extensions Ringing

The **Many Extensions Ringing** service of Quadro provides parallel ringing on several extensions when there is an incoming call.

Attention: By configuring **Many Extensions Ringing** service, **Forwarding** and **Call Hunting** services will be automatically disabled on the current extension.

Selecting **Enable Service** activates the Many Extensions Ringing service on the current extension.

The table displayed here lists all existing extensions on the Quadro. Any or all of the extensions can be enabled to participate in the Many Extensions Ringing for the selected extension. The **State** column displays whether or not the extension is enabled to participate with the Many Extension Ringing. The **State** column also displays whether or not the extension is active.

The **Line Status** column indicates whether the extension is **Attached** or **Not Attached**. An extension cannot ring if it is **Not Attached**. It has to be attached to the line by the administrator from the **Extensions Management** page.

The **Enable/Disable** functional buttons are used to select one or more extensions to be involved or not in the Many Extensions Ringing procedure. The state of the participant (Enabled or Disabled) is also displayed in the table.

Please Note: The system will prevent the enabling of extensions if the total number of extensions participant to the specific caller **Many Extension Ringing** exceeds a certain number dependant on the hardware resources of the board.

When saving the Many Extensions Ringing configuration, a message will notify the user that the Forwarding services have been disabled.

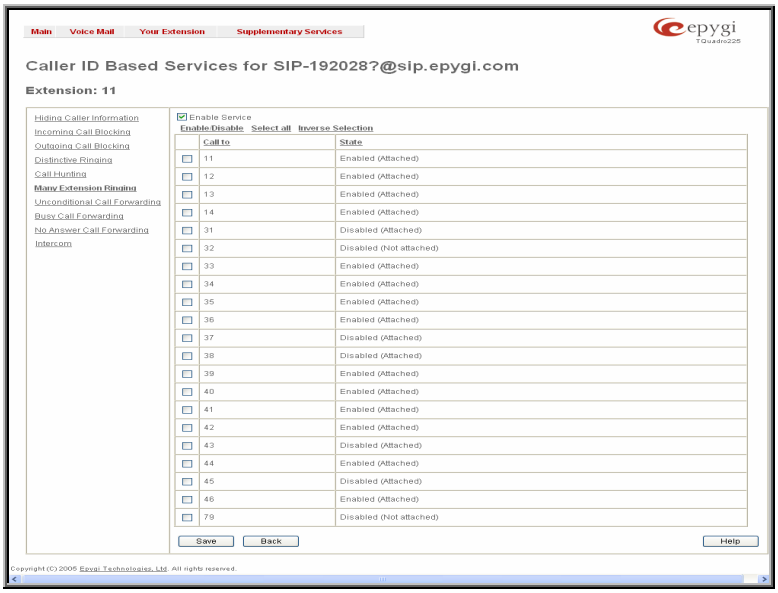

Fig. III-28 Many Extension Ringing page

By default, the Many Extension Ringing table includes only one pre-configured extension for that the service is already configured. Otherwise if the **Many Extensions Ringing** service is enabled but no called extensions are provided (or the extension provided by default has been deleted), the current extension will not ring.

Call Forwarding

Quadro offers the following types of call forwarding:

- **Unconditional** - all incoming calls from the certain caller will be forwarded to the defined destinations.
- **Busy** - calls from the certain caller will be forwarded to the defined destinations only when called extension is busy with another call.
- **No Answer** - calls from the certain caller will be forwarded to the defined destinations only when called extension is unable to answer the incoming call. No answer timeout is configured from the General Settings page.

The following rules are applicable to all call forwarding types:

- By setting up unconditional call forwarding service, **Many Extension Ringing** and **Call Hunting** services will be automatically disabled. The exception is cases when unconditional call forwarding is enabled from the handset (see Feature Codes).
- PSTN destinations (with **PSTN** or **Auto** call type) have priority in **Forward to** list. If there are different destinations in the **Forward to** list, the call will be forwarded to PSTN destination (in the same time any available SIP or PBX destinations will receive a short ring). If the PSTN destination was not successful, the next PSTN destination will be dialed, otherwise if there are no more PSTN destinations in the table, the call will be forwarded to the first SIP or PBX destination.
- If there are multiple entries with PBX or SIP call types, or PBX and SIP call types together, then all destinations will ring simultaneously and the call will be established with the destination that will pick up the call the first.
- Unconditional call forwarding service has higher priority versus to other forwarding types, i.e. when Unconditional Call Forwarding is enabled, Busy Forwarding and No Answer Forwarding services will not work even if they are enabled. In the meantime, Busy Forwarding can work in conjunction with No Answer Forwarding and vice versa.

Unconditional Call Forwarding

Unconditional Call Forwarding is a service of Quadro that allows the automatic unconditional transfer of incoming calls to a variety of other destinations.

The **Enable Service** checkbox selection activates the unconditional call forwarding service on the current extension.

The table displayed here lists the destinations where the incoming call from a particular caller should be unconditionally forwarded.

Enable/Disable functional button is used to enable/disable the corresponding forwarding destinations. This is helpful to avoid removing forwarding destination(s) if they are not applicable at the moment.
Add opens the **Add Entry** page to add forwarding destinations. It consists of the following components:

Call Type lists the available call types:

- PBX - forwarding destination is a local Quadro extensions or Auto Attendant
- SIP – forwarding destination is reached through a SIP server
- PSTN – forwarding destination is a PSTN user
- Auto – used for undefined call types. In this case, the routing pattern will be considered and parsed through the Local Routing Table

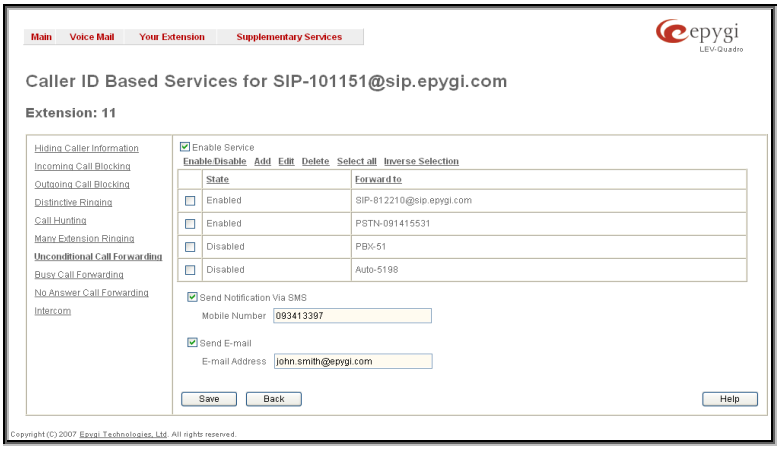

Fig. III-29 Unconditional Call Forwarding page

The **Forward To** text field requires the SIP address (see chapter Entering a SIP Addresses correctly), a PBX extension or a PSTN number, where an incoming call from a certain caller should be unconditionally forwarded. If the address already exists in the table, selecting **Save** will display the error "Caller address already exists". A wildcard is allowed in this field (see chapter Entering a SIP Addresses correctly). Entering **"*"** as PBX or PSTN addresses will apply the configuration of Caller ID Based services to all extensions or PSTN users.

Two digits should be inserted in the **Forward To** text field for the PBX call type. The PSTN number length depends on the area code and phone number.

Fig. III-30 Call Forwarding – Add Entry page

Send Notification Via SMS checkbox enables SMS notifications sending to the user's mobile phone when unconditional call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **Mobile Number** text field where the user's mobile phone number should be defined. If you feel this service is not working, contact your system administrator to configure the SMS Settings.

Send E-mail checkbox enables email notifications sending to the user's mailbox when unconditional call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **E-mail Address** text field where the user's email address should be defined. If you feel this service is not working, contact your system administrator to configure the Mail Settings.

When saving the unconditional call forwarding configuration, a message will notify the user that Many Extension Ringing and Call Hunting services have been disabled.

Busy Call Forwarding

Busy **Call Forwarding** is a service of Quadro that allows the automatic transfer of incoming calls to a variety of other destinations when the called extension is busy.

Fig. III-31 Busy Call Forwarding page

The **Enable Service** checkbox selection activates the busy call forwarding service on the current extension.

The table displayed here lists the destinations where the incoming call from a particular caller should be forwarded to when the called extension is busy.

Add opens the **Add Entry** page to add forward destinations. It consists of the following components:

Call Type lists the available call types:

- PBX - forwarding destination is a local Quadro extensions or Auto Attendant
- SIP – forwarding destination is reached through a SIP server
- PSTN – forwarding destination is a PSTN user
- Auto – used for undefined call types. In this case, the routing pattern will be considered and parsed through the Local Routing Table.

The **Forward To** text field requires the SIP address (see chapter Entering a SIP Addresses correctly), extension or PSTN number, where an incoming call from a particular caller should be forwarded when the called extension is busy. If the address already exists in the table, selecting **Save** will display the error "Caller address already exists". A wildcard is allowed in this field (see chapter Entering a SIP Addresses correctly). Entering "*" as PBX or PSTN addresses will apply configuration of Caller ID Based services to all extensions or PSTN users.

Two digits should be inserted in the **Forward To** text field for the PBX call type. The PSTN number length depends upon the area code and phone number.

Send Notification Via SMS checkbox enables SMS notifications sending to the user's mobile phone when busy call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **Mobile Number** text field where the user's mobile phone number should be defined. If you feel this service is not working, contact your system administrator to configure the SMS Settings.

Send E-mail checkbox enables email notifications sending to the user's mailbox when busy call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **E-mail Address** text field where the user's email address should be defined. If you feel this service is not working, contact your system administrator to configure the Mail Settings.

When saving the busy call forwarding configuration, a message will notify the user that Many Extensions Ringing and Call Hunting services have been disabled.

No Answer Call Forwarding

No Answer Call Forwarding is a service of Quadro that allows the automatic transfer of incoming calls to a variety of other destinations when the called extension is unable to pick up the call. No answer timeout is configured from the Basic Services page.

The **Enable Service** checkbox selection activates the no answer call forwarding service on the current extension.

The table displayed here lists the destinations where the incoming call from a particular caller should be forwarded to if the called extension is unable to answer the call.

Add opens the **Add Entry** page to add forwarding destinations. It consists of the following components:

Call Type lists the available call types:

- PBX - forwarding destination is a local Quadro extensions or Auto Attendant
- SIP – forwarding destination is reached through a SIP server
- PSTN – forwarding destination is a PSTN user
- Auto – used for undefined call types. In this case, routing pattern will be considered here and parsed through Local Routing Table.

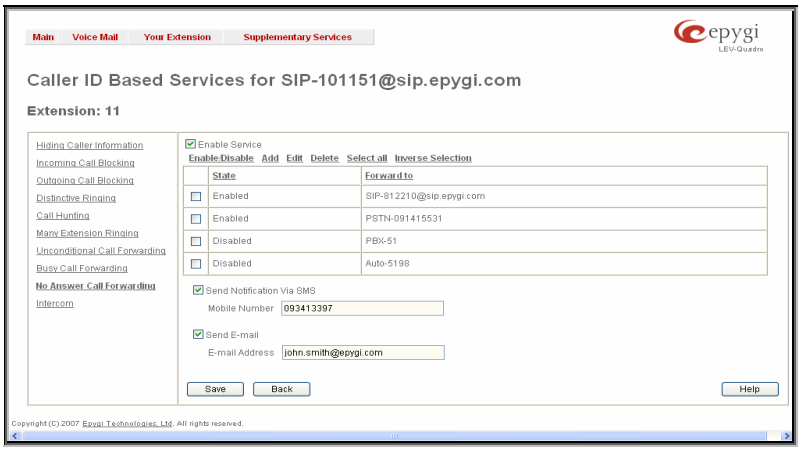

Fig. III-32 No Answer Call Forwarding page

The **Forward To** text field requires the SIP address (see chapter Entering a SIP Addresses correctly), extension or PSTN number, where incoming call from the certain caller should be forwarded in case the called extension does not answers the call. If the address already exists in the table, selecting **Save** will display the error "Caller address already exists". A wildcard is allowed in this field (see chapter Entering a SIP Addresses correctly). Entering "*" as PBX or PSTN addresses will apply configuration of Caller ID Based services to all extensions or PSTN users.

Two digits should be inserted into the **Forward To** text field for the PBX call type. The PSTN number length depends on the area code and phone number.

Send Notification Via SMS checkbox enables SMS notifications sending to the user's mobile phone when no answer call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **Mobile Number** text field where the user's mobile phone number should be defined. If you feel this service is not working, contact your system administrator to configure the SMS Settings.

Send E-mail checkbox enables email notifications sending to the user's mailbox when no answer call forwarding on the corresponding extension from the certain caller takes place. This checkbox selection enables the **E-mail Address** text field where the user's email address should be defined. If you feel this service is not working, contact your system administrator to configure the Mail Settings.

When saving the busy call forwarding configuration, a message will notify the user that Many Extensions Ringing and Call Hunting services have been disabled.

Intercom

Intercom service is used to call an extension by forcing it to go off-hook and opening two-way communication. The service is particularly used for announcements addressed to an extension. When the call comes in to the extension which has an Intercom service enabled, called extension will automatically go off-hook (the phone speaker automatically becomes activated) and the caller will be able to make his announcement.

Please Note: Intercom service requires called extension to use one of the following SIP or analog phones which are able to automatically go off-hook:

- SNOM 320 (SIP phone)
- SNOM 360 (SIP phone)
- Aastra 480i (SIP phone)
- Aastra 9133i (SIP phone)
- Aastra 9112i (SIP phone)
- Aastra 480e (analog phone)

Fig. III-33 No Answer Call Forwarding page

The **Enable Service** checkbox selection activates the Intercom service on the current extension.

Attention: Intercom will not work if the called extension is in call. If this service is enabled along with Many Extension Ringing, Call Hunting or Forwarding services, Intercom will not take effect and other high priority services will be primary.

Basic Services

The **Basic Services** page allows you to configure the basic telephony features of Quadro, such as Call Waiting, Hold Music, Hot Line and Do Not Disturb services.

The **Basic Services** page consists of two frames. The left frame lists all services. When you click on a service, its corresponding settings will be displayed in the right frame.

Please Note: Remember to save changes before moving between the service configuration pages.

General Settings

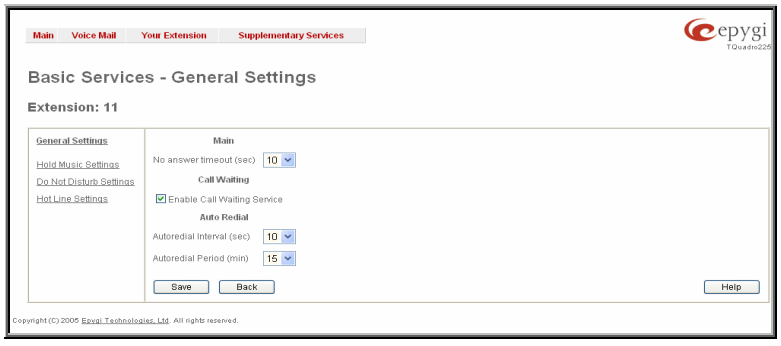

Fig. III-34 Basic Services – General Settings page

The **General Settings** page consists of the following components:

No answer timeout lists the possible timeout values for the incoming call ringing duration before the voice mail system answers.

Call Waiting

Call Waiting is used to receive an incoming call when you are currently on a call. The caller will hear a ringing tone and the Quadro user will hear a special beeping on the telephone when the call arrives. To switch between the current call and the new incoming call, use the appropriate calling code.

Enable Call Waiting Service activates this service and makes it available for the phone handset.

Auto Redial

The **Autoredial** service of Quadro supports automatic redialing if the called destination is currently busy or unavailable.

The **Autoredial Settings** page displays the available settings for automated redialing. Use the appropriate calling code to enable **Autoredial** from the handset. The caller may hang up or stay with the lifted handset after enabling the Autoredial service. When hanging up, the system will keep trying to reach the last called destination for the specified time period. When the destination is reached, the caller's phone will start to ring. A voice message is being played to the called party asking to wait until the caller answers. If the caller keeps the handset lifted, the system will also continue to reach the last called destination and the call will be established when the destination called answers the call.

Autoredial Interval sets the time values between redialing attempts (counted in seconds).

Autoredial Period sets the total duration of redial attempts (counted in minutes).

Please Note: This service is functional for SIP and PBX calls only. For PSTN calls, this feature works as a single redial (with no multiple attempts to reach the called destination).

Hold Music

The **Hold Music Settings** are used to define the music that will be played while on hold or putting a remote party on hold. To specify this music the following checkboxes and text fields are available:

Send Hold Music to Remote IP Party enables the specified music for sending to a remote IP party whenever the remote party on hold and waiting. If this checkbox is disabled, Quadro will not send hold music to the remote party. The remote party will hear their own hold music, or something similar, if configured.

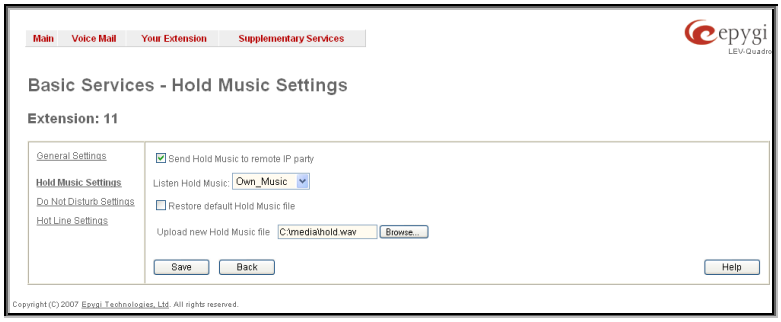

Fig. III-35 Basic Services - Hold Music Settings page

The **Listen Hold Music** drop down list specifies the music the current user will hear while on hold. It offers the following options:

- **Off** - no music will be played.
- **Own Music** - the current user will define the music that will be played to them self while being on hold.
- **Remote Party's Music** - the current user will hear the remote party's hold music, if enabled, and sent by remote party.

Restore Default Hold Music File enables the default music. If the checkbox is selected, the text field **Upload New Hold Music File** will be disabled.

The **Upload New Hold Music File** text field can be used to enter the path where the hold music file is located. If the hold music file is browsed with the help of file-chooser, this field displays the path of the browsed file. The **Browse** button is used to browse for the hold music file.

The music file needs to be in PCMU wave format, otherwise the system will prevent uploading the file and will display the warning message "Invalid audio file or format is not supported". Additionally, the system will refuse uploading if insufficient memory is available for the corresponding extension and will then announce "You do not have enough space".

Please Note: It is recommended to use a piece of music not longer than one minute to leave enough space for user-defined messages and voice mails.

The **Download Hold Music File** link appears only if a file has been uploaded recently. It downloads the audio file to the PC and opens a window where the saving location can be specified.

Do Not Disturb

Do Not Disturb Settings are used to configure the **Do Not Disturb** service. The service is used to turn off the phone ringer and may only be enabled from the handset with the appropriate calling code.

The **Do Not Disturb Settings** page consists of the following components:

The **Actual State** field indicates the state of the service (active or not active). It also indicates the time left until the end of **Do Not Disturb** service functionality or "Service is not active" if the service is disabled.

The **Expiration Timeout** drop down list is used to choose the period for the phone ringer to be off when enabling the **Do Not Disturb** service.

The **Send Message to Caller Party** checkbox enables a voice message notification to be sent to the caller. When both the **Send Message to Caller Party** checkbox and the Do Not Disturb feature are enabled on the called extension, a voice message that the called destination is temporarily unavailable will be played to the caller. If checkbox is not selected, callers will be routed to the voice mailbox (if enabled) or unconditionally disconnected. The extension can be reached again as soon as the service is disabled or the **Expire Timeout** period is over.

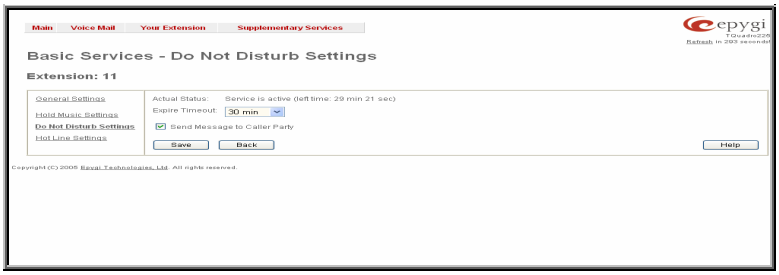

Fig. III-36 Basic Services - Do Not Disturb Settings

Hot Line Settings

Hot Line Settings are used to set a destination that should be automatically dialed in case of no action for a predefined period after lifting the handset. This user-configurable service is commonly used for emergency calls.

The **Hot Line Settings** page offers of the following input options:

Enable Hot Line Service enables the Hot Line Service and all components below.

Timeout is used to select the inactivity timeout before the defined number will be dialed automatically.

Call Type lists the available call types:

- PBX - local calls between Quadro extensions and the Auto Attendant
- SIP – calls through a SIP server
- Auto – destination (independent on whether it is a PBX number, a SIP address or a PSTN number) will be reached through Routing.

Depending on the **Call Type** selection, a destination extension number, a SIP address (see chapter Entering a SIP Addresses correctly), or a PSTN number should be inserted into the text field **Called Address**. If the defined caller address is not corresponding to these requirements, an error message, "Caller address is incorrect", will appear and prevent saving the incorrect data. The PSTN number length depends on the area code and the phone number.

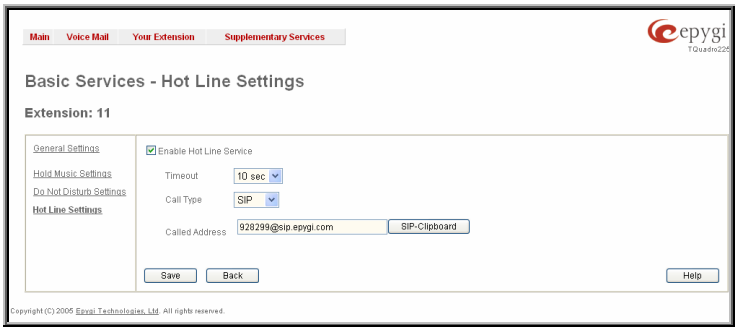

Fig. 3-37 Basic Services - Hotline Settings page

Logout

This option is used to close the session between the user PC and Quadro and to leave the Quadro Web Management or enter into the management with another login. By selecting the **Web Management** link, the startup page will be displayed and the user will need to login again.

Appendix: Glossary

A

Asymmetric Digital Subscriber Line (ADSL) - is a method for moving data over regular phone lines. An ADSL circuit is much faster than a regular phone connection, and the wires coming into the subscriber's premises are the same (copper) wires used for regular phone service. An ADSL circuit must be configured to connect two specific locations, similar to a leased line. A commonly discussed configuration of ADSL would allow a subscriber to receive data (download) at speeds of up to 1.544 Megabits per second, and to send (upload) data at speeds of 128 kilobits per second. Thus the 'Asymmetric' part of the acronym. Another commonly discussed configuration would be symmetrical: 384 kilobits per second in both directions. In theory ADSL allows download speeds of up to 9 megabits per second and upload speeds of up to 640 kilobits per second. ADSL is often discussed as an alternative to ISDN, allowing higher speeds in cases where the connection is always to the same place.

Asynchronous Transfer Mode (ATM) - a 53-byte cell-switching technology well suited for carrying voice, data, and video traffic on the same infrastructure. It is inherently scalable in throughput and was designed to provide Quality of Service (QoS).

Auto Attendant (AA) - a feature providing remote access to Quadro voice connectivity services. Specifically, it supports remote connection to Quadro extensions, to their mailboxes and for making calls to other destinations. Remote access to Quadro AA is possible through IP and PSTN calls.

Auto Redial - a service that allows automatically recalling the destination that was busy.

C

Call - establishment of (or attempt to establish) a voice or data connection between two endpoints, or between two points that provide a partial link (e.g., a trunk) between two endpoints.

Call Blocking - a Quadro service that allows blocking unwanted incoming or outgoing calls over Quadro.

Call Forwarding - a Quadro service that allows transferring a call to another destination in case the Quadro user is busy, not answering or unconditional.

Call Hold - a Quadro service that allows holding the call in order to make another one, or to answer the second incoming call. The first call partner will listen to music while being on hold.

Call Waiting - a Quadro service that allows receiving a second call while being busy with the first one. The waiting party will hear a beeping during the conversation.

Caller ID - caller information is displayed on the called party's phone.

Central Office (CO) - a local switching system that connects lines to lines and lines to trunks. Sometimes used to refer to the building in which a switching system is located and the associated equipment. It is also the physical point where calls enter the long distance network.

CODEC - COmpression/DECompression that transforms analog voice into a digital bit stream and vice-versa. It is now an overall term for the technology used in digital audio and video.

D

D-channel - In ISDN, the 16-kb/s segment of a 144-kb/s, full-duplex subscriber service channel that is subdivided into 2B+D channels, i.e., into two 64-kb/s clear channels and one 16-kb/s channel for the ISDN basic rate. **Note 1**: The D channel is usually used for out-of-band signaling. The two 64-kb/s clear channels are used for subscriber voice and data services. **Note 2**: The D-channel specifications are addressed in the CCITT Recommendation for the Integrated Services Digital Network (ISDN). **Note 3**: The D-channel may be 64 kb/s for the primary rate ISDN service.

Data Encryption Standard (DES) - a block cipher algorithm for encrypting (coding) data so it is nearly impossible for anyone without the decryption key to get the data back in unscrambled form. The DES standard enciphers and deciphers data using a 64-bit key.

Daylight saving time (**DST)** - a convention of advancing clocks so that afternoons have more daylight and mornings have less. Typically clocks are adjusted forward one hour near the start of spring and are adjusted backward in autumn.

Dial peer - an addressable call endpoint. In Voice over IP (VoIP), there are two types of dial peers: POTS and VoIP.

Dial plan - a description of the dialing arrangements for customer use on a network.

Digital Signal Processor (DSP) - A specialized microprocessor that performs calculations on digitized signals that were originally analog, and then forwards the results. The big advantage of DSPs lies in their programmability. DSPs can be used to compress voice signals to as little as 4,800 bps. DSPs are an integral part of all voice processing systems and fax machines.

Digital Subscriber Line (DSL) - public network technology that delivers high bandwidth over conventional copper wiring at limited distances. There are four types of DSL: ADSL, HDSL, SDSL, and VDSL. All are provisioned via modem pairs, with one modem located at a central office and the other at the customer site. Since most DSL technologies do not use the entire bandwidth of the twisted pair, there remains room for a voice channel.

Distinctive Ringing - Quadro service that allows a specific ringing pattern assignment for particular callers over Quadro.

Domain - a place on the Internet you can visit with your browser, i.e., a www site. It also might be a single computer or computers masqueraded as a single computer. On the Internet, the domain is the address that gets you there.

Domain name - in a network using the TCP/IP, the full domain name consists of a sequence of names (labels) separated by periods (dots), for example, Quadro.epygi.com.

Domain Name System (DNS) - a system used on the Internet for translating names of network nodes into their addresses.

Downstream - in communications, there are two circuits. One coming toward you and the other going away from you. Downstream is another term for the transmission coming toward you.

Dual-Tone Multifrequency (DTMF) - a method of signaling consisting of a push-button or touch tone dial that sends out a sound consisting of two discrete tones that are picked up and interpreted by telephone switches (either PBXs or central offices).

Dynamic Host Configuration Protocol (DHCP) - a network standard regulating the IP address and other information assogned to the clients by the server.

Dynamic Host Control Protocol (DHCP) - a protocol that is used to dynamically allocate and assign IP addresses. DHCP allows you to move network devices from one subnet to another without administrative attention.

E

E1 - wide area network digital transmission scheme. E1 is the European equivalent of a T1 line. The E1's higher clock rate (2.048 MHz) allows for 32 separate 64Kbps channels, which include one channel for framing and one channel for D-channel information.

Ethernet - a localarea network used for connecting computers, printers, workstations, terminals, servers, etc., within the same building or campus. Ethernet operates over twisted pair and/or over coaxial cable at speed up to 10Mbps.

Ethernet Controller - the unit that connects a device to the Ethernet cable.

Ethernet Switch - the device that connects local area networks.

Extensions - users over Quadro.

External User - users connecting Quadro by IP or PSTN calls.

F

Firewall - a combination of hardware and software that limits the exposure of a computer or group of computers to an attack from outside. A firewall is a system or combination of systems that enforce a boundary between two or more networks. One purpose of an Internet firewall is to provide a single point of entry where a defense can be implemented, allowing access to the Internet resources from within the organization, and providing controlled access from the internet to hosts inside the organization’s internal networks.

Firmware - is computer or OS required software that resides on ROM

Foreign Exchange (FX) - a Central Office trunk that has access to a distant Central Office. A dial tone is returned from that distant Central Office and a location can be reached in the area of the foreign Central Office by dialing a local number.

Foreign Exchange Office (FXO) - a service that can be ordered from the telephone company that provides local telephone service from a central office that is outside (foreign to) the subscriber’s exchange area. To generate a call from the computer telephony system to the POTS set, you will need a FXS connection configured. See also FXS.

Foreign Exchange Station (FXS) - Interface that connects directly to a standard telephone, fax machine, or similar device over a standard RJ-11 modular telephone cable, and supplies ringing voltage, dial tone, and similar signals to it. see FXO

Framing - A procedure for controlling errors. Consists of inserting bits so the receiver can identify the time slots allocated to each subchannel

G

Gatekeeper - is the central control entity that performs management functions in a Voice and Fax over IP network and for multimedia applications such as video conferencing. Gatekeepers provide intelligence for the network, including address resolution, authorization, and authentication services, the logging of call detail records, and communications with network management systems. Gatekeepers also monitor the network for engineering purposes as well as real-time network management and load balancing, controling bandwidth, and providing interfaces to existing legacy systems.

Gateway - an entrance into and out from a communications network. Technically, a gateway is an electronic repeater that intercepts and steers electrical signals from one network to another.

Greeting - voice messages that are played to the Quadro users or users calling to the Quadro activating specific services.

H

Hold Music - music played to the party that is on hold.

Host - an intelligent device attached to the network; can be also a mainframe computer.

Host Name - the name given to a mainframe computer or device.

Hunt Grouping - the Quadro service that allows configuring several users over Quadro to ring in series when a specific call arrives.

Hypertext Transfer Protocol (HTTP) - the protocol used by Web browsers and Web servers to transfer files, such as text and graphics files.

I

Integrated Services Digital Network (ISDN) - is a system of digital phone connections which allows voice and data to be transmitted simultaneously across the world using end-to-end digital connectivity. There are two basic types of ISDN service: Basic Rate Interface (BRI) and Primary Rate Interface (PRI). BRI is a basic service is intended to meet the needs of most individual users. PRI is intended for users with greater capacity requirements

Internet Control Message Protocol (ICMP) - a network-layer Internet protocol that reports errors and provides other information relevant to IP packet processing.

Internet Protocol (IP) - a unique, 32-bit number for a specific TCP/IP host on the Internet, normally printed in decimal form (for example, 128.122.40.227). Part of the TCP/IP family of protocols, it describes the software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages.

Internet Service Provider (ISP) - a vendor who provides direct access to the Internet or a company that provides Internet access to other companies and individuals.

Intrusion Detection System (IDS) - is a firewall, but together with deleting the dangerous packets or packets including intrusion attacks, IDS also keeps information about dropped packets and the senders responsible for them.

IP address - also known as the Internet Address, is a unique 32-bit identifier for a specific TCP/IP host computer on a network. IP addresses are in dotted decimal form, such as 192.168.10.26, with each of the four address fields assigned as many as 255 values.

IP address Mask - A range of IP addresses defined so that only machines with IP addresses within the range are allowed access to an internet service. To mask a portion of the IP address, replace it with the asterisk wild card character (*). For example, 192.44.*.* represents every computer on the internet with an IP address beginning with 192.44

IP Gatekeeper - defines the policies that govern a multimedia system such as dialing plans, user privileges, bandwidth consumption, and others. The gatekeeper also provides the means to extract information from such a system for various purposes, e.g., billing information, users that are logged in, etc. The gatekeeper is also a focal point for the introduction of supplementary services.

IP Gateway - most commonly, a network device that converts voice and fax calls, in real time, between the public switched telephone network (PSTN) and an IP network. The main IP gateway functions include voice, fax, compression/decompression, packetization, call routing, and control signaling. Additional features may include interfaces to external controllers, such as gatekeepers or soft-switches, billing systems, and network management systems.

IP PBX - an enterprise-based IP data network device that switches VoIP telephone traffic.

IP Telephony - a technology that allows voice phone calls to be made over the Internet or other packet networks using a PC via gateways and standard telephones.

IPSec - is used to provide security for transmission of sensitive information over unprotected networks such as the Internet. IPSec acts at the network layer, protecting and authenticating IP packets between participating IPSec devices ("peers"), such as Cisco routers.

J

Jitter Buffer - the buffer that collects incoming packets to place them in the right order. If the network has a high delay variation, increasing the Jitter Buffer can improve the audio quality, but this also increases the delay.

L

LED - Light-Emitting Diode, A semiconductor device that emits visible light when conducting current. Has replaced incandescent lamps as indicators in most electronic equipment.

Lifeline POTS - a voice telephone line that works even if electricity is cut off at the customer premises, since the line is powered from emergency backup at the central office. Multiple lifeline POTS lines can be delivered on one copper pair with the use of a digital line powered pair gain system. A basic telephone service supplying standard single line telephones, telephone lines, and access to the PSTN.

Local Area Network (LAN) - a short distance data communications network (typically within a building or campus) used to link computers and peripheral devices under some form of standard control.

Login -the procedure of identifying a user with a username and a password to enter into the protected field.

M

Many Extensions Ringing - a Quadro service that allows configuring several users over Quadro to ring simultaneously when a specific call arrives.

Media Access Control (MAC) Address - the address for a device as it is identified at the Media Access Control layer in the network architecture.

Media Access Control (MAC) Layer - is one of two sublayers that make up the Data Link Layer of the OSI model. The MAC layer is responsible for moving data packets to and from one Network Interface Card (NIC) to another across a shared channel.

Media Gateway - a generic class of products grouped under the Media Gateway Control Protocol (MGCP). A major function of the media gateway is simple IP/TDM conversion under the control of a softswitch.

N

Name server - a directory service that provides a mapping between a resource's global name and its physical location in the network.

Network Address Translation (NAT) - is used to allow LAN devices that do not have their own static IP addresses to connect to the Internet sharing an IP address. NAT will assume control of assigning their IP address. Furthermore, the NAT takes care that packets will reach the LAN PC that originated the traffic. This mechanism is absolutely transparent for the users (or the PCs in the LAN).

Network Time Protocol (NTP) - a protocol that is used for time counting in the Internet, based on the atomic clocks with the precision in milliseconds. This is the recommended protocol for synchronizing the time of hosts in the network.

P

Packetization Interval - the time interval between two RTP packets of the same stream. If the interval is increased, the overhead is decreased but the voice quality might deteriorate. If the interval is decreased, the network load is increased and the delay is reduced.

Password - a secret alphanumeric string used to identify and to allow the user to have access to a system.

PCM - a form of modulation in which the information signals are sampled at regular intervals and a series of pulses in coded form are transmitted representing the amplitude of the information signal at that time.

Point-to-Point Protocol (PPP) - allows a computer to connect to the Internet with a standard dial-up telephone line and a high-speed modem and to enjoy most of the benefits of the direct connection.

Point-to-Point Tunneling Protocol (PPTP) - enables virtual private networking - enabling secure remote access to corporate networks over the Internet.

POTS (Plain Old Telephone Service) - is the standard telephone service that most homes use. It is also referred to as the PSTN, or the Public Switched Telephone Network

Private Branch Exchange (PBX) - a telephone switch owned privately, usually by a large company. If it owns a PBX, a company does not need to lease a telephone line for each telephone set at a site.

Proxy server - an intermediate device that receives SIP requests from a client and then initiates requests on the client's behalf.

Public Switched Telephone Network (PSTN) - refers to the local telephone company.

R

Real-Time Transport Protocol (RTP) - the Internet-standard protocol for the transport of real-time data, including audio and video, allows applications to synchronize audio and video information. RTP connections are established between servers across the Internet after voice has been converted to IP format. RTP is used in virtually all Voice-over-IP architectures, for videoconferencing, media-on-demand, and other applications.

Real-Time Transport Control Protocol (RTCP**)** - is the control protocol that works in conjunction with RTP. RTCP control packets are periodically transmitted by each participant in an RTP session to all other participants. Feedback of information to the application can be used to control performance and for diagnostic purposes.

Registration - procedure of user subscribing to a server. Usually some personal parameters such as username, password, etc., are required upon registration.

Remote Testing - remote connection from the Epygi Support office to the customer's Quadro for testing and/or for troubleshooting.

Router - A device that determines the next network point to which a data packet should be forwarded enroute toward its destination. The router is connected to at least two networks and determines which way to send each data packet based on its current understanding of the state of the networks it is connected to. Routers create or maintain a table of the available routes and use this information to determine the best route for a given data packet

RSA - is an asymmetric key system. It must be available on both sides of the VPN and generates on each side a different pair of keys, a private and a public key.

S

Security Parameter Index (SPI) - is an index to keep VPN tunnels distinct. A security association is defined by destination, protocol and SPI. Without the SPI, connections to the same gateway using the same protocol would not be distinguishable.

Session Initiation Protocol (SIP) - is an application-layer control protocol that can establish, modify and terminate multimedia sessions or calls. SIP is increasingly used for Internet telephony signaling, in gateways, PC phones, softswitches, and softphones, but it is not limited to Internet telephony, and can be used to initiate and manage any type of session, including video, interactive games, and text chat.

Signaling - a process of sending a transmission signal over a physical medium for communication.

Silence Suppression - a method that allows disabling RTP packet transmission when there is no voice activity. This feature helps to avoid extra traffic when the RTP stream doesn't contains voice data.

Simple Network Management Protocol (SNTP) - the Internet standard protocol developed to manage nodes on an IP network.

SIP address - unique address of the users registered on the SIP server. The address can be used to connect the user. The full SIP address has the following format: "display name" <username@ipaddress:port>.

SIP server - this server is used for registering users. It gives a possibility to make IP connections between users registered on the same SIP server.

Software - PC programs.

Software PBX - a telephone system that converges voice and data on an industry-standard computing platform and uses computer telephony components that conform to industry standards. Since they conform to industry standards, software PBXs are interoperable with third-party systems and CT components. Conformance also allows software PBXs to run third-party enhanced applications such as desktop call control, graphical voice mail, automatic call distribution (ACD), IP gateways, follow-me call forwarding, unified messaging, and CRM integration.

Speed Calling - a service that allows making a personal address book for every Quadro user. A simple digit combination can be assigned to any destination phone number.

T

Transfer - a service giving a possibility to readdress incoming calls. Call Transfer can be conditional (with consultation) and unconditional (without consultation).

Transmission Control Protocol (TCP) - a connection-oriented transport layer protocol that provides reliable full-duplex data transmission. TCP is part of the TCP/IP protocol stack.

Transmission Control Protocol/Internet Protocol (TCP/IP) - is a networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems.

Trunk: - is a communications channel between two points, typically referring to large-bandwidth telephone channels between switching centers that handle many simultaneous voice and data signals.

Trunk Level 1 (T1) - a high-speed (1.544Mb/s) digital telephone line with the equivalent of 24 individual 64Kb/s channels that are joined via time division multiplexing. A T1 line can be used to transmit voice or data, and many are used to provide connections to the Internet. T1 is the North American equivalent of an E1 line.

U

UDP - a connectionless transport layer protocol in the TCP/IP protocol stack. UDP is a simple protocol that exchanges datagram without acknowledgments or guaranteed delivery, requiring that error processing and retransmission be handled by other protocols.

Universal Serial Bus (USB) - is an interface with a protocol that is designed to handle a broad range of devices - telephones, modems, printers, etc.

Upstream- in communications, there are two circuits - one coming toward you and the other going away from you. Upstream is another term for the name of the channel going away from you.

URL - an identifier used to locate content that is transported via the HTTP protocol.

Username - identification name of the user. Usually used for registration and login.

V

VCI - parameter used to configure ATM settings and is usually given by the Internet provider.

Virtual Private Network (VPN) - connects two local networks (intranets) over the insecure Internet securely. VPN routers manage authentication between servers and clients and handle data encryption for the connection. Only authorized users can access the network and the data exchange cannot be intercepted. A VPN includes authentication and encryption to protect data integrity and confidentiality. VPNs are “virtual” in the sense that individuals can use the public Internet as a means of securely accessing an internal network. Once the VPN connection is established, users have access to the same network resources, addresses, and so forth as if they were connected locally. VPNs are “private” because the data is encrypted between two VPN gateways. Encryption makes it very difficult for anyone to intercept data and capture sensitive information such as passwords.

Voice mail - a brief message that external users can leave for the Quadro users in the event that nobody answers the call.

Voice Mail System (VMS) - a feature providing the possibility of leaving brief voice messages at the unavailable or busy Quadro extension’s mailbox.

Voice mailbox -is the mailbox where voice mails are collected.

Voice message - help messages that are played to the user giving a hint on how to manipulate the menus within Quadro using the phone handset.

Voice Over Internet Protocol (VOIP) - technology used to transmit voice conversations over a data network using the Internet Protocol. This provides ability to carry normal telephony-style voice over an IP-based internet with POTS-like functionality, reliability, and voice quality.

VPI - parameter used to configure ATM settings usually given by the Internet provider.

W

Wide Area Network (WAN) - a communications network used to connect computers and other devices across a large area.